

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. 1416UN	EXPIRY: 2023-06-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

MATERIALS PROVIDED

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

® All trademarks recognised.

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

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Dungloe, Donegal,
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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

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	42.3	35.9	48.7	3.20	6.40	Bromocresol Purple
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	173	147	199	13.00	26.00	AMP optimised to NVKC/SFBC 37°C
	U/l	167	142	192	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	105	89	121	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.3	9.79	14.8	1.26	2.51	Enzymatic
Bile Acids	µmol/l	24.9	20.0	29.8	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	


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Bilirubin Total	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazonium ion
	mg/dl	1.57	1.25	1.89	0.16	0.32	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	99.9	91.9	108	4.00	8.00	ISE indirect
Cholesterol	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	
Cholinesterase	U/l	6863	5491	8235	686.00	1372.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	177	145	209	16.00	32.00	CK-NAC serum start (DGKC) 37°C
	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	188	154	222	17.00	34.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	11.5	9.17	13.8	1.17	2.33	Colorimetric
	µg/dl	73.1	58.3	87.9	7.40	14.80	
Creatinine	µmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	138	111	165	13.50	27.00	Enzymatic UV method
	mg/dl	1.56	1.25	1.87	0.16	0.31	
	µmol/l	140	112	168	14.00	28.00	Creatinine PAP method
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	142	113	171	14.50	29.00	Jaffe rate blanked
	mg/dl	1.60	1.28	1.92	0.16	0.32	
	µmol/l	143	114	172	14.50	29.00	IDMS traceable
	mg/dl	1.62	1.29	1.95	0.17	0.33	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C


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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Hexokinase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL PPD
	mg/dl	57.1	48.6	65.6	4.25	8.50	Direct Clearance Method
	mmol/l	1.45	1.23	1.67	0.11	0.22	
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.46	1.24	1.68	0.11	0.22	HDL - Ultra
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.59	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	204	174	234	15.00	30.00	L->P 37°C
	U/l	208	176	240	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.82	0.72	0.91	0.05	0.10	Arsenazo III
	mg/dl	1.98	1.74	2.22	0.12	0.24	
	mmol/l	0.84	0.73	0.94	0.05	0.10	Enzymatic
	mg/dl	2.03	1.78	2.28	0.13	0.25	



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Size 20 x 5 ml / 5 x 5 ml		Expiry 2023-06-28					
Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.22	3.57	4.87	0.33	0.65	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	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	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	228	179	277	24.50	49.00	
	µmol/l	47.7	37.7	57.7	5.00	10.00	Calculated from Transferrin
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.1	104	7.15	14.30	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	76.0	105	7.15	14.30	
	mmol/l	1.01	0.84	1.18	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	74.7	104	7.35	14.70	
UIBC	µmol/l	20.4	16.8	24.0	1.80	3.60	Direct Colorimetric
	µg/dl	114	93.9	134	10.05	20.10	
Urea	mmol/l	7.02	5.97	8.07	0.53	1.05	Urease end point
	mg/dl	42.2	35.9	48.5	3.15	6.30	

**Abbott Alinity/ Architect c/ci Systems®**

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Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	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	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase 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	5.80	5.04	6.56	0.38	0.76	

ABX Pentra 400®

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Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.6	33.6	45.6	3.00	6.00	Bromocresol Green
	g/dl	3.96	3.36	4.56	0.30	0.60	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	23.2	18.3	28.1	2.45	4.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.36	1.07	1.65	0.15	0.29	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	ISE direct
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.81	0.71	0.91	0.05	0.10	Xylidyl Blue
	mg/dl	1.97	1.74	2.20	0.12	0.23	
Phosphate Inorganic	mmol/l	1.60	1.36	1.84	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.96	4.22	5.70	0.37	0.74	
Potassium	mmol/l	3.85	3.54	4.16	0.16	0.31	ISE method - direct
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.1	108	7.40	14.80	
Urea	mmol/l	6.55	5.57	7.53	0.49	0.98	Urease end point
	mg/dl	39.4	33.5	45.3	2.95	5.90	
	mmol/l	6.64	5.64	7.64	0.50	1.00	Urease kinetic
	mg/dl	39.9	33.9	45.9	3.00	6.00	
	mmol/l	6.64	5.64	7.64	0.50	1.00	BUN
	mg/dl	18.6	15.8	21.4	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.49	4.77	6.21	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	

Beckman Coulter AU Series®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	208	165	251	21.50	43.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	39.4	33.5	45.3	2.95	5.90	Bromocresol Green
	g/dl	3.94	3.35	4.53	0.30	0.59	
	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	201	170	232	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	95	80	110	7.50	15.00	pNP Maltotriose substrates 37°C
	U/l	94	80	108	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	22.1	17.5	26.7	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.29	1.02	1.56	0.14	0.27	
Bilirubin Total	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.83	1.44	2.22	0.20	0.39	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	30.7	24.3	37.1	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
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	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	97.4	89.6	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	
	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	163	142	184	10.50	21.00	
Cholinesterase	U/l	5524	4419	6629	552.50	1105.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	191	157	225	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	185	151	219	17.00	34.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	142	113	171	14.50	29.00	Enzymatic UV method
	mg/dl	1.60	1.28	1.92	0.16	0.32	
	µmol/l	142	114	170	14.00	28.00	Creatinine PAP method
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	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	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	IDMS traceable
	mg/dl	1.49	1.19	1.79	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	45	59	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	52	44	60	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	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL PPD
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct Clearance Method
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.43	1.21	1.65	0.11	0.22	HDL - Ultra
	mg/dl	55.2	46.7	63.7	4.25	8.50	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	91.1	131	9.95	19.90	
	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.50	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	204	174	234	15.00	30.00	L->P 37°C
	U/l	445	378	512	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	209	177	241	16.00	32.00	L->P IFCC 37°C
	U/l	196	166	226	15.00	30.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.03	0.90	1.16	0.06	0.13	Spectrophotometric
	mg/dl	0.715	0.628	0.802	0.04	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Osmolality	mOsm/kg	291	232	350	29.50	59.00	Calculated
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	ISE method - indirect
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction kinetic
	g/dl	5.69	4.55	6.83	0.57	1.14	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.5	35.2	53.8	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	249	197	301	26.00	52.00	
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.2	108	7.35	14.70	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
UIBC	μmol/l	25.7	21.1	30.3	2.30	4.60	Direct Colorimetric
	μg/dl	144	118	170	13.00	26.00	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	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	5.78	5.04	6.52	0.37	0.74	
Zinc	μmol/l	25.6	20.5	30.7	2.55	5.10	Colorimetric with deproteinisation
	μg/dl	167	134	200	16.50	33.00	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Purple
	g/dl	4.34	3.69	4.99	0.33	0.65	
Alkaline Phosphatase	U/l	178	152	204	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Differential rate pH change
Bilirubin Total	µmol/l	32.6	25.7	39.5	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.91	1.50	2.32	0.21	0.41	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	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	
CK Total	U/l	200	164	236	18.00	36.00	Monothioglycerol 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Hexokinase
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	5.94	5.05	6.83	0.45	0.89	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.00	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
LD (LDH)	U/l	171	146	196	12.50	25.00	L->P 37°C
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Calmagite
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction kinetic
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.05	0.89	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.3	108	7.30	14.60	
Urea	mmol/l	7.65	6.51	8.79	0.57	1.14	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	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	5.80	5.04	6.56	0.38	0.76	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Purple
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	180	153	207	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	95	80	110	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.8	10.1	15.5	1.35	2.70	Differential rate pH change
	mmol/l	12.8	10.1	15.5	1.35	2.70	Ion selective electrode
Bilirubin Direct	µmol/l	15.9	12.5	19.3	1.70	3.40	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.930	0.731	1.13	0.10	0.20	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	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	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	198	162	234	18.00	36.00	Monothioglycerol 37°C
	U/l	195	160	230	17.50	35.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
µmol/l	136	109	163	13.50	27.00	IDMS traceable	
mg/dl	1.54	1.23	1.85	0.16	0.31		
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Hexokinase
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	5.94	5.04	6.84	0.45	0.90	Oxygen electrode
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.95	5.06	6.84	0.45	0.89	Glucose oxidase
mg/dl	107	91.2	123	7.90	15.80		
HDL - Cholesterol	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct HDL PPD
	mg/dl	57.5	48.6	66.4	4.45	8.90	
	mmol/l	1.49	1.27	1.71	0.11	0.22	HDL - Ultra
	mg/dl	57.5	49.0	66.0	4.25	8.50	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	170	145	195	12.50	25.00	L->P 37°C

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	554	471	637	41.50	83.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	173	147	199	13.00	26.00	L->P IFCC 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Calmagite
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	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	3.90	3.59	4.21	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	56.4	45.1	67.7	5.65	11.30	Biuret reaction kinetic
	g/dl	5.64	4.51	6.77	0.57	1.13	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
Urea	mmol/l	7.51	6.39	8.63	0.56	1.12	Urease end point
	mg/dl	45.1	38.4	51.8	3.35	6.70	
	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
Glucose	mmol/l	6.42	5.46	7.38	0.48	0.96	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.7	73.6	102	7.05	14.10	
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	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.18	5.38	6.98	0.40	0.80	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
ALT (GPT)	U/l	41	32	50	4.50	9.00	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	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	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	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
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	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	26.8	21.2	32.4	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Arsenazo III
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Creatinine PAP method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	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	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.51	1.29	1.73	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	58.3	49.8	66.8	4.25	8.50	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction end point
	g/dl	5.78	4.62	6.94	0.58	1.16	
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	
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	38.8	33.0	44.6	2.90	5.80	Turbidimetric Assays
	g/dl	3.88	3.30	4.46	0.29	0.58	
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
	U/l	149	127	171	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Enzymatic

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	21.7	17.1	26.3	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Roche JG factored
	mg/dl	1.25	0.989	1.51	0.13	0.26	
Bilirubin Total	µmol/l	26.5	21.0	32.0	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	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	26.5	20.9	32.1	2.80	5.60	Diazonium ion
	mg/dl	1.55	1.22	1.88	0.17	0.33	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.70	7.86	9.54	0.42	0.84	
	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	98.7	90.8	107	3.95	7.90	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	4.02	3.49	4.55	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	138	110	166	14.00	28.00	Roche Creatinine Plus	
	mg/dl	1.56	1.24	1.88	0.16	0.32		
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.51	1.21	1.81	0.15	0.30		
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.50	1.21	1.79	0.15	0.29		
	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		51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase	
	mg/dl	112	95.1	129	8.45	16.90		
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		
	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 4th Generation	
mg/dl	55.6	47.5	63.7	4.05	8.10			
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.	
	µg/dl	107	87.8	126	9.60	19.20		
	µmol/l	19.6	16.0	23.2	1.80	3.60	Colorimetric without ppt.	
	µg/dl	110	89.4	131	10.30	20.60		
Lactate	mmol/l	1.58	1.29	1.87	0.15	0.29	Colorimetric Lactate Oxidase	
	mg/dl	14.2	11.6	16.8	1.30	2.60		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	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	219	186	252	16.50	33.00	L->P IFCC 37°C
	U/l	158	134	182	12.00	24.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Ion selective electrode
	mg/dl	0.692	0.609	0.775	0.04	0.08	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.31	3.69	4.93	0.31	0.62	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.3	44.3	66.3	5.50	11.00	Biuret reaction end point
	g/dl	5.53	4.43	6.63	0.55	1.10	
	g/l	55.4	44.3	66.5	5.55	11.10	Biuret reaction kinetic
	g/dl	5.54	4.43	6.65	0.56	1.11	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.0	31.6	48.4	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	224	177	271	23.50	47.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	79.1	109	7.35	14.70	
	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.2	110	7.75	15.50	
UIBC	µmol/l	20.8	17.1	24.5	1.85	3.70	Direct Colorimetric
	µg/dl	116	95.6	136	10.20	20.40	
Urea	mmol/l	6.83	5.80	7.86	0.52	1.03	Urease kinetic
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.83	5.81	7.85	0.51	1.02	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.8	34.6	47.0	3.10	6.20	Bromocresol Green
	g/dl	4.08	3.46	4.70	0.31	0.62	
Alkaline Phosphatase	U/l	244	207	281	18.50	37.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Arsenazo III
	mg/dl	8.38	7.54	9.22	0.42	0.84	
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	
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
Glucose	mmol/l	6.65	5.66	7.64	0.50	0.99	Glucose oxidase
	mg/dl	120	102	138	9.00	18.00	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.17	5.38	6.96	0.40	0.79	

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.8	33.8	45.8	3.00	6.00	Bromocresol Green
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	279	237	321	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	217	185	249	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	178	151	205	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	175	149	201	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	95	129	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	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	26.5	21.2	31.8	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	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	
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	



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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Arsenazo III
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	101	93.3	109	3.85	7.70	ISE direct
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	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	138	110	166	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	139	111	167	14.00	28.00	Creatinine PAP method
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	6.36	5.40	7.32	0.48	0.96	Hexokinase
	mg/dl	115	97.3	133	8.85	17.70	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PEGME
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct Clearance Method
mg/dl	58.7	49.8	67.6	4.45	8.90		

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	21.4	17.6	25.2	1.90	3.80	Colorimetric without ppt.
	µg/dl	120	98.4	142	10.80	21.60	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	3.88	3.57	4.19	0.16	0.31	ISE method - direct
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
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	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	220	174	266	23.00	46.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	166	131	201	17.50	35.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	125	98	152	13.50	27.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	12.2	8.17	16.2	2.02	4.03	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Purple
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	40.1	34.1	46.1	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	39.2	33.4	45.0	2.90	5.80	Turbidimetric Assays
g/dl	3.92	3.34	4.50	0.29	0.58		
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	279	237	321	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	217	185	249	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	178	151	205	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	97	131	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	174	148	200	13.00	26.00	AMP optimised to NVKC/SFBC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
	U/l	111	95	127	8.00	16.00	AMP optimised to NVKC/SFBC 25°C



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP non-optimised 37°C
	U/l	133	113	153	10.00	20.00	AMP non-optimised 30°C
	U/l	109	93	125	8.00	16.00	AMP non-optimised 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	32	50	4.50	9.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
	U/l	78	66	90	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	75	64	86	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	89	75	103	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	96	81	111	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	86	73	99	6.50	13.00	Saccharogenic 37°C



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	89	75	103	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	94	80	108	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	95	80	110	7.50	15.00	Beckman Synchron AMY7 37°C
	U/l	95	81	109	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	105	89	121	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	85	72	98	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	0.99	0.81	1.16	0.09	0.18	Immunoturbidimetric
	mg/dl	98.6	80.9	116	8.85	17.70	
Apolipoprotein B	g/l	0.64	0.53	0.76	0.06	0.12	Immunoturbidimetric
	mg/dl	64.2	52.6	75.8	5.80	11.60	
AST (GOT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C
	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
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer SCE 30°C
U/l	16	13	19	1.50	3.00	Tris buffer SCE 25°C	
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Colorimetric



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	15.1	11.9	18.3	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	12.8	10.2	15.4	1.30	2.60	Differential rate pH change
	mmol/l	13.4	10.7	16.1	1.35	2.70	Enzymatic
	mmol/l	13.5	10.7	16.3	1.40	2.80	Ion selective electrode
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	4th Generation Colorimetric
	µmol/l	25.7	20.6	30.8	2.55	5.10	5th Generation Colorimetric
Bilirubin Direct	µmol/l	22.0	17.3	26.7	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.29	1.01	1.57	0.14	0.28	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	22.0	17.3	26.7	2.35	4.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.29	1.01	1.57	0.14	0.28	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Modified Jendrassik
	mg/dl	1.04	0.825	1.26	0.11	0.22	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	36.3	28.7	43.9	3.80	7.60	Diazo with Dichloroaniline (DCA)
	mg/dl	2.12	1.68	2.56	0.22	0.44	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.54	1.22	1.86	0.16	0.32	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	36.2	28.6	43.8	3.80	7.60	Modified Jendrassik
	mg/dl	2.12	1.67	2.57	0.23	0.45	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.24	2.01	2.47	0.12	0.23	Methylthymol blue
	mg/dl	8.98	8.06	9.90	0.46	0.92	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.19	1.98	2.40	0.11	0.21	NM-BAPTA
	mg/dl	8.78	7.94	9.62	0.42	0.84	
	mmol/l	0.93	0.83	1.02	0.05	0.09	Ionised calcium
	mg/dl	3.71	3.34	4.08	0.19	0.37	
Chloride	mmol/l	102	93.8	110	4.10	8.20	Colorimetric
	mmol/l	99.1	91.2	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
	mmol/l	98.8	90.9	107	3.95	7.90	ISE direct

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	151	132	170	9.50	19.00	
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5764	4611	6917	576.50	1153.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	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	185	152	218	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	96	136	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	198	162	234	18.00	36.00	Monothioglycerol 37°C
	U/l	124	101	147	11.50	23.00	Monothioglycerol 30°C
	U/l	84	69	99	7.50	15.00	Monothioglycerol 25°C
Copper	µmol/l	15.0	12.0	18.0	1.50	3.00	Atomic absorption
	µg/dl	95.4	76.3	115	9.55	19.10	
	µmol/l	15.2	12.2	18.2	1.50	3.00	Colorimetric
	µg/dl	96.7	77.6	116	9.55	19.10	
Cortisol	nmol/l	515	386	644	64.50	129.00	Roche Cobas E411
	µg/dl	18.5	13.9	23.1	2.30	4.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	μmol/l	139	111	167	14.00	28.00	Enzymatic UV method
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	μmol/l	140	112	168	14.00	28.00	Creatinine PAP method
	mg/dl	1.58	1.27	1.89	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	
	μmol/l	137	109	165	14.00	28.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
	mg/dl	1.54	1.23	1.85	0.16	0.31	
Digoxin	nmol/l	2.05	1.64	2.46	0.21	0.41	Immunoturbidimetric
	ng/ml	1.60	1.28	1.92	0.16	0.32	
Folate	nmol/l	37.4	28.4	46.4	4.50	9.00	Roche Cobas E411
	ng/ml	16.5	12.5	20.5	2.00	4.00	
Free T4	pmol/l	16.2	12.1	20.3	2.05	4.10	Abbott Architect
	ng/dl	1.26	0.944	1.58	0.16	0.32	
	pg/ml	12.6	9.44	15.8	1.58	3.16	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	18.0	13.5	22.5	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Siemens Centaur XP/XPT/Classic
	pmol/l	17.8	13.3	22.3	2.25	4.50	Beckman Access
	ng/dl	1.39	1.04	1.74	0.18	0.35	
	pg/ml	13.9	10.4	17.4	1.75	3.50	Beckman Access
	pmol/l	16.0	12.0	20.0	2.00	4.00	Beckman Dxl800
	ng/dl	1.25	0.936	1.56	0.16	0.31	
	pg/ml	12.5	9.36	15.6	1.57	3.14	Beckman Dxl800
	pmol/l	32.2	24.2	40.2	4.00	8.00	Vitros ECi
	ng/dl	2.51	1.89	3.13	0.31	0.62	
	pg/ml	25.1	18.9	31.3	3.10	6.20	Vitros ECi
	pmol/l	20.5	15.4	25.6	2.55	5.10	Roche Cobas E411
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Roche Cobas E411
	pmol/l	20.4	15.3	25.5	2.55	5.10	Roche Cobas 6000/8000
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Roche Cobas 6000/8000
pmol/l	19.6	14.7	24.5	2.45	4.90	Biomerieux Vidas FT4N Kit	
ng/dl	1.53	1.15	1.91	0.19	0.38		
pg/ml	15.3	11.5	19.1	1.90	3.80	Biomerieux Vidas FT4N Kit	
Gentamicin	μmol/l	7.64	6.11	9.17	0.77	1.53	Immunoturbidimetric
	μg/ml	3.65	2.92	4.38	0.37	0.73	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	64	54	74	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	
	U/l	52	44	60	4.00	8.00	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	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
	U/l	55	47	63	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	43	37	49	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Ortho Vitros Microslide Systems	
	mg/dl	108	92.1	124	7.95	15.90		
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose dehydrogenase	
	mg/dl	110	93.3	127	8.35	16.70		
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase	
	mg/dl	111	94.2	128	8.40	16.80		
	mmol/l	6.04	5.13	6.95	0.46	0.91	Oxygen electrode	
	mg/dl	109	92.4	126	8.30	16.60		
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase	
	mg/dl	113	96.0	130	8.50	17.00		
	HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
		mg/dl	56.7	48.3	65.1	4.20	8.40	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Vitros Magnetic HDL
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	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	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	51.3	43.6	59.0	3.85	7.70	
mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros dHDL PTA/MgCl ₂ direct precipitation	
mg/dl	50.6	42.8	58.4	3.90	7.80		
mmol/l	1.46	1.24	1.68	0.11	0.22	HDL - Ultra	
mg/dl	56.4	47.9	64.9	4.25	8.50		
mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Roche 4th Generation	
mg/dl	54.8	46.7	62.9	4.05	8.10		
Immunoglobulin A	g/l	1.74	1.31	2.17	0.22	0.43	Immunoturbidimetric
	mg/dl	174	131	217	21.50	43.00	
Immunoglobulin G	g/l	6.82	5.59	8.05	0.62	1.23	Immunoturbidimetric
	mg/dl	682	559	805	61.50	123.00	
Immunoglobulin M	g/l	0.85	0.68	1.02	0.08	0.17	Immunoturbidimetric
	mg/dl	84.6	67.7	102	8.45	16.90	
Iron	μmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
	μg/dl	107	87.8	126	9.60	19.20	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.3	15.9	22.7	1.70	3.40	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
	µmol/l	19.6	16.0	23.2	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	110	89.4	131	10.30	20.60	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Ion selective electrode
	mg/dl	14.1	11.6	16.6	1.25	2.50	
	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	
	mmol/l	1.46	1.20	1.72	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.5	16.7	1.30	2.60	
mmol/l	1.56	1.28	1.84	0.14	0.28	UV LDH	
mg/dl	14.1	11.5	16.7	1.30	2.60		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	600	510	690	45.00	90.00	Ortho Vitros Microslide Systems 37°C
	U/l	190	161	219	14.50	29.00	L->P 37°C
	U/l	137	116	158	10.50	21.00	L->P 30°C
	U/l	96	82	110	7.00	14.00	L->P 25°C
	U/l	450	383	517	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	325	277	373	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	228	194	262	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	408	347	469	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



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	413	351	475	31.00	62.00	P->L SFBC 37°C
	U/l	298	253	343	22.50	45.00	P->L SFBC 30°C
	U/l	209	178	240	15.50	31.00	P->L SFBC 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
	U/l	250	213	287	18.50	37.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
	U/l	230	185	275	22.50	45.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	44	35	53	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.27	1.11	1.43	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.882	0.771	0.993	0.06	0.11	
	mmol/l	1.01	0.89	1.14	0.06	0.13	Ion selective electrode
	mg/dl	0.701	0.615	0.787	0.04	0.09	
	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	
mmol/l	1.04	0.92	1.17	0.06	0.13	Randox Colorimetric	
	mg/dl	0.722	0.635	0.809	0.04		0.09
Magnesium	mmol/l	0.82	0.72	0.91	0.05	0.10	Arsenazo III
	mg/dl	1.98	1.74	2.22	0.12	0.24	
	mmol/l	0.85	0.74	0.95	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.81	2.29	0.12	0.24	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Calmagite
	mg/dl	2.10	1.85	2.35	0.13	0.25	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
	mmol/l	0.82	0.72	0.92	0.05	0.10	Methylthymol blue
	mg/dl	2.00	1.75	2.25	0.13	0.25	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.83	0.73	0.93	0.05	0.10	Enzymatic
	mg/dl	2.02	1.78	2.26	0.12	0.24	
NEFA	mmol/l	1.28	1.09	1.47	0.10	0.19	Colorimetric
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
	mOsm/kg	306	245	367	30.50	61.00	Freezing point depression
	mOsm/kg	294	235	353	29.50	59.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.7	9.38	14.0	1.16	2.32	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.28	3.66	4.90	0.31	0.62	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.01	3.69	4.33	0.16	0.32	Enzymatic
	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - direct
	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.88	4.70	7.06	0.59	1.18	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction kinetic
	g/dl	5.69	4.55	6.83	0.57	1.14	
PSA Total	ng/ml =	17.0	12.7	21.3	2.15	4.30	Beckman Access standardised to Hybritech
	ng/ml =	13.6	10.2	17.0	1.70	3.40	bioMerieux VIDAS TPSA
	ng/ml =	12.3	9.21	15.4	1.55	3.09	Siemens Centaur XP/XPT/Classic
	ng/ml =	12.2	9.14	15.3	1.53	3.06	Abbott Architect
	ng/ml =	15.8	11.9	19.7	1.95	3.90	Cobas E411
	ng/ml =	15.6	11.7	19.5	1.95	3.90	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	143	136	150	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.18	0.94	1.42	0.12	0.24	Abbott Architect
	µU/ml =	1.60	1.28	1.92	0.16	0.32	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.56	1.25	1.87	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.40	1.12	1.68	0.14	0.28	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.63	1.31	1.95	0.16	0.32	Roche Cobas E411
	µU/ml =	1.65	1.32	1.98	0.17	0.33	Roche Cobas 6000/8000



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	μU/ml =	1.30	1.04	1.56	0.13	0.26	Beckman Dxl800 Hyper TSH
	μU/ml =	1.34	1.07	1.61	0.14	0.27	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	μU/ml =	1.34	1.08	1.60	0.13	0.26	Beckman Dxl 600/800 Access (3rd IS)
TIBC	μmol/l	45.4	35.9	54.9	4.75	9.50	Ortho Vitros Microslide Systems
	μg/dl	254	201	307	26.50	53.00	
	μmol/l	40.5	32.0	49.0	4.25	8.50	Removal of excess free iron
	μg/dl	226	179	273	23.50	47.00	
	μmol/l	41.5	32.8	50.2	4.35	8.70	FE+UIBC(saturation with iron)
	μg/dl	232	183	281	24.50	49.00	
	μmol/l	45.1	35.6	54.6	4.75	9.50	Direct Colorimetric
	μg/dl	252	199	305	26.50	53.00	
	μmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	μg/dl	255	202	308	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	1.98	1.48	2.48	0.25	0.50	Abbott Architect
	ng/ml	1.29	0.963	1.62	0.16	0.33	
	ng/dl	129	96.3	162	16.35	32.70	Abbott Architect
	nmol/l	2.49	1.87	3.11	0.31	0.62	Siemens Centaur XP/XPT/Classic
	ng/ml	1.62	1.22	2.02	0.20	0.40	
	ng/dl	162	122	202	20.00	40.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.41	1.81	3.01	0.30	0.60	Roche Cobas E411
	ng/ml	1.57	1.18	1.96	0.20	0.39	
ng/dl	157	118	196	19.50	39.00	Roche Cobas E411	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.29	1.72	2.86	0.29	0.57	Roche Cobas 6000/8000
	ng/ml	1.49	1.12	1.86	0.19	0.37	
	ng/dl	149	112	186	18.50	37.00	Roche Cobas 6000/8000
Total T4	nmol/l	91.2	68.4	114	11.40	22.80	Abbott Architect
	µg/dl	7.11	5.34	8.88	0.89	1.77	
	ng/ml	71.1	53.4	88.8	8.85	17.70	Abbott Architect
	nmol/l	90.8	68.1	114	11.35	22.70	Siemens Centaur XP/XPT/Classic
	µg/dl	7.08	5.31	8.85	0.89	1.77	
	ng/ml	70.8	53.1	88.5	8.85	17.70	Siemens Centaur XP/XPT/Classic
	nmol/l	89.2	66.9	112	11.15	22.30	Roche Cobas E411
	µg/dl	6.96	5.22	8.70	0.87	1.74	
	ng/ml	69.6	52.2	87.0	8.70	17.40	Roche Cobas E411
	nmol/l	88.5	66.4	111	11.05	22.10	Roche Cobas 6000/8000
µg/dl	6.90	5.18	8.62	0.86	1.72		
ng/ml	69.0	51.8	86.2	8.60	17.20	Roche Cobas 6000/8000	
Transferrin	g/l	1.96	1.57	2.35	0.20	0.39	Immunoturbidimetric
	mg/dl	196	157	235	19.50	39.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.9	108	7.50	15.00	
	mmol/l	1.04	0.88	1.20	0.08	0.16	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	92.0	77.7	106	7.15	14.30	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase	
	mg/dl	91.2	76.4	106	7.40	14.80		
	mmol/l	1.22	1.03	1.41	0.10	0.19	Ortho Vitros Microslide Systems	
	mg/dl	108	91.2	125	8.40	16.80		
UIBC	µmol/l	21.2	17.3	25.1	1.95	3.90	Direct Colorimetric	
	µg/dl	119	96.7	141	11.15	22.30		
Urea	mmol/l	6.77	5.75	7.79	0.51	1.02	Ortho Vitros Microslide Systems	
	mg/dl	40.7	34.6	46.8	3.05	6.10		
	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease end point	
	mg/dl	43.0	36.5	49.5	3.25	6.50		
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic	
	mg/dl	42.9	36.5	49.3	3.20	6.40		
	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease hypochlorite	
	mg/dl	42.4	36.0	48.8	3.20	6.40		
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN	
	mg/dl	20.0	17.0	23.0	1.50	3.00		
	Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
		mg/dl	5.59	4.87	6.31	0.36	0.72	
mmol/l		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
mg/dl		5.83	5.07	6.59	0.38	0.76		
mmol/l		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		5.81	5.06	6.56	0.38	0.75		
mmol/l		0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290	
mg/dl		5.75	4.99	6.51	0.38	0.76		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

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	5.80	5.04	6.56	0.38	0.76	
Vitamin B12	pmol/l	483	386	580	48.50	97.00	Roche Cobas E411
	pg/ml	654	523	785	65.50	131.00	
Zinc	µmol/l	26.9	21.5	32.3	2.70	5.40	Colorimetric with deproteinisation
	µg/dl	176	140	212	18.00	36.00	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

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		5.8	4.4	7.2	0.70	1.39	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.2	5.5	8.9	0.87	1.73	% of total Protein (Beckman Capillary)
beta-globulin		9.5	7.2	11.8	1.14	2.28	% of total Protein (Beckman Capillary)
gamma-globulin		10.2	7.8	12.7	1.23	2.45	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	261	221	301	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	203	172	234	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	167	141	193	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	137	117	157	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	96	128	8.00	16.00	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	38	31	45	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	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	22.1	17.4	26.8	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.29	1.02	1.56	0.14	0.27	
Bilirubin Total	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	28.5	22.6	34.4	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	135	108	162	13.50	27.00	Enzymatic UV method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.49	5.52	7.46	0.49	0.97	Glucose oxidase
	mg/dl	117	99.5	135	8.75	17.50	
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	435	370	500	32.50	65.00	P->L German methods 37°C
	U/l	314	267	361	23.50	47.00	P->L German methods 30°C
	U/l	221	188	254	16.50	33.00	P->L German methods 25°C
	U/l	413	351	475	31.00	62.00	P->L SFBC 37°C
	U/l	298	253	343	22.50	45.00	P->L SFBC 30°C
	U/l	209	178	240	15.50	31.00	P->L SFBC 25°C
	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C
	U/l	158	134	182	12.00	24.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
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	
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.2	108	7.35	14.70	
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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.20	5.39	7.01	0.41	0.81	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.17	5.36	6.98	0.41	0.81	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.58	4.86	6.30	0.36	0.72	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	33	49	4.00	8.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.1	11.9	18.3	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Bilirubin, Unconjugated Vitros BU	µmol/l	15.0	11.9	18.1	1.55	3.10	BuBc Vitros Slide
	mg/dl	0.878	0.696	1.06	0.09	0.18	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	Ortho Vitros Microslide Systems
	mg/dl	151	132	170	9.50	19.00	
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5553	4442	6664	555.50	1111.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	180	148	212	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Vitros IDMS Traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Vitros Magnetic HDL
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	19.6	16.0	23.2	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	110	89.4	131	10.30	20.60	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	600	510	690	45.00	90.00	Ortho Vitros Microslide Systems 37°C
	U/l	250	213	287	18.50	37.00	
Lipase	U/l	230	185	275	22.50	45.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.85	0.74	0.95	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.81	2.29	0.12	0.24	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.88	4.70	7.06	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	45.4	35.9	54.9	4.75	9.50	Ortho Vitros Microslide Systems
	µg/dl	254	201	307	26.50	53.00	
Triglycerides	mmol/l	1.22	1.03	1.41	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	108	91.2	125	8.40	16.80	

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.77	5.75	7.79	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	6.77	5.75	7.79	0.51	1.02	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.59	4.87	6.31	0.36	0.72	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
	g/l	39.6	33.7	45.5	2.95	5.90	Turbidimetric Assays
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	144	122	166	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	112	95	129	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	92	78	106	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.8	10.1	15.5	1.35	2.70	Colorimetric
	mmol/l	13.3	10.5	16.1	1.40	2.80	Enzymatic

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.9	17.3	26.5	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	21.7	17.2	26.2	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	µmol/l	21.9	17.3	26.5	2.30	4.60	Roche JG factored
	mg/dl	1.28	1.01	1.55	0.14	0.27	
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.20	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	94.1	86.6	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5523	4419	6627	552.00	1104.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	179	146	212	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	145	116	174	14.50	29.00	Enzymatic UV method
	mg/dl	1.64	1.31	1.97	0.17	0.33	
	µmol/l	144	115	173	14.50	29.00	Roche Creatinine Plus
	mg/dl	1.63	1.30	1.96	0.17	0.33	
	µmol/l	138	110	166	14.00	28.00	Jaffe rate blanked
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	137	109	165	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.55	1.23	1.87	0.16	0.32	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	20.4	15.3	25.5	2.55	5.10	Roche Cobas 6000/8000
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Roche Cobas 6000/8000
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



Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

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
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.42	1.20	1.64	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	54.8	46.3	63.3	4.25	8.50	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
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	202	172	232	15.00	30.00	L->P 37°C
	U/l	146	124	168	11.00	22.00	L->P 30°C
	U/l	102	87	117	7.50	15.00	L->P 25°C
	U/l	405	344	466	30.50	61.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.636	0.808	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction end point
	g/dl	5.78	4.62	6.94	0.58	1.16	
	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction kinetic
	g/dl	5.77	4.62	6.92	0.58	1.15	
PSA Total	ng/ml =	15.8	11.8	19.8	2.00	4.00	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.65	1.32	1.98	0.17	0.33	Roche Cobas 6000/8000
TIBC	µmol/l	39.8	31.4	48.2	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	176	268	23.00	46.00	
	µmol/l	47.8	37.8	57.8	5.00	10.00	Calculated from Transferrin
	µg/dl	267	211	323	28.00	56.00	
Total T3	nmol/l	2.29	1.72	2.86	0.29	0.57	Roche Cobas 6000/8000
	ng/ml	1.49	1.12	1.86	0.19	0.37	
	ng/dl	149	112	186	18.50	37.00	



Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	88.5	66.4	111	11.05	22.10	Roche Cobas 6000/8000
	µg/dl	6.90	5.18	8.62	0.86	1.72	
	ng/ml	69.0	51.8	86.2	8.60	17.20	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	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
UIBC	µmol/l	20.9	17.2	24.6	1.85	3.70	Direct Colorimetric
	µg/dl	117	96.1	138	10.45	20.90	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.2	48.8	3.15	6.30	Bromocresol Green
	g/dl	4.25	3.62	4.88	0.32	0.63	
Alkaline Phosphatase	U/l	150	127	173	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	117	99	135	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	96	81	111	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	149	127	171	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 25°C
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	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.5	17.0	26.0	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.9	21.3	32.5	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.18	1.97	2.39	0.11	0.21	NM-BAPTA
	mg/dl	8.74	7.90	9.58	0.42	0.84	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	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	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	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



Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
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	227	193	261	17.00	34.00	L->P IFCC 37°C
	U/l	164	139	189	12.50	25.00	L->P IFCC 30°C
	U/l	115	98	132	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.40	3.72	5.08	0.34	0.68	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
mg/dl	4.40	3.75	5.05	0.33	0.65		
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.3	46.7	69.9	5.80	11.60	Biuret reaction end point
	g/dl	5.83	4.67	6.99	0.58	1.16	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
	mmol/l	1.02	0.86	1.19	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	75.7	105	7.30	14.60	
Urea	mmol/l	7.04	5.98	8.10	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	

**Roche Cobas C111®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.04	5.98	8.10	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	143	121	165	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	94	128	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.5	9.95	15.1	1.28	2.55	Enzymatic
Bilirubin Direct	µmol/l	22.6	17.9	27.3	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.32	1.05	1.59	0.14	0.27	
	µmol/l	22.1	17.5	26.7	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.29	1.02	1.56	0.14	0.27	
	µmol/l	22.2	17.6	26.8	2.30	4.60	Roche JG factored
mg/dl	1.30	1.03	1.57	0.14	0.27		



Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	22.3	17.7	26.9	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.27	1.93	0.17	0.33	
Calcium	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
		mg/dl	8.86	7.98	9.74	0.44	
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	94.6	87.0	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	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	182	150	214	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	114	94	134	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	77	64	90	6.50	13.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	145	116	174	14.50	29.00	Roche Creatinine Plus
	mg/dl	1.64	1.31	1.97	0.17	0.33	
	µmol/l	143	115	171	14.00	28.00	Jaffe rate blanked
	mg/dl	1.62	1.30	1.94	0.16	0.32	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	138	111	165	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.56	1.25	1.87	0.16	0.31	
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	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.55	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	402	341	463	30.50	61.00	P->L German methods 37°C
	U/l	290	246	334	22.00	44.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Xylidyl Blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.3	32.6	50.0	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	231	182	280	24.50	49.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase	
mg/dl	99.1	83.4	115	7.85	15.70		
UIBC	µmol/l	22.1	18.1	26.1	2.00	4.00	Direct Colorimetric
	µg/dl	124	101	147	11.50	23.00	
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	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.06	6.54	0.37	0.74	
	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 c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Purple
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	39.8	33.8	45.8	3.00	6.00	Turbidimetric Assays
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	75	103	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	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	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bile Acids	µmol/l	23.8	19.1	28.5	2.35	4.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	22.0	17.3	26.7	2.35	4.70	Roche JG factored
	mg/dl	1.29	1.01	1.57	0.14	0.28	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	26.3	20.8	31.8	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.5	21.0	32.0	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.55	1.23	1.87	0.16	0.32	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
		mg/dl	8.78	7.90	9.66	0.44	
mg/dl		8.78	7.90	9.66	0.44	0.88	
mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA	
	mg/dl	8.78	7.90	9.66	0.44		0.88
	mg/dl	8.78	7.90	9.66	0.44		0.88
Chloride	mmol/l	95.6	88.0	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5507	4406	6608	550.50	1101.00	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	146	117	175	14.50	29.00	Roche Creatinine Plus
	mg/dl	1.65	1.32	1.98	0.17	0.33	
	µmol/l	142	114	170	14.00	28.00	Jaffe rate blanked
	mg/dl	1.60	1.29	1.91	0.16	0.31	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.54	1.27	1.81	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.07	0.13	Spectrophotometric
	mg/dl	0.736	0.646	0.826	0.05	0.09	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	μmol/l	40.4	31.9	48.9	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	226	178	274	24.00	48.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	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
	mg/dl	95.6	80.0	111	7.80	15.60	
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	0.34	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	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	78	66	90	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	103	87	119	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bile Acids	µmol/l	25.7	20.6	30.8	2.55	5.10	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.1	16.7	25.5	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	32.1	25.4	38.8	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.28	2.06	2.50	0.11	0.22	Arsenazo III
	mg/dl	9.14	8.26	10.0	0.44	0.88	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.26	3.71	4.81	0.28	0.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	219	180	258	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	143	114	172	14.50	29.00	Enzymatic UV method
	mg/dl	1.62	1.29	1.95	0.17	0.33	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.58	5.60	7.56	0.49	0.98	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.48	1.21	1.75	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	427	363	491	32.00	64.00	P->L German methods 37°C
	U/l	217	184	250	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	44	35	53	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.89	0.78	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. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - direct
	mmol/l	4.01	3.69	4.33	0.16	0.32	Enzymatic
Protein Total	g/l	60.2	48.2	72.2	6.00	12.00	Biuret reaction end point
	g/dl	6.02	4.82	7.22	0.60	1.20	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - direct
	mmol/l	145	138	152	3.50	7.00	Enzymatic
TIBC	μmol/l	47.9	37.8	58.0	5.05	10.10	Direct Colorimetric
	μg/dl	268	211	325	28.50	57.00	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
Urea	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.28	6.19	8.37	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.26	6.80	0.39	0.77	



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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.1	46.3	3.05	6.10	Bromocresol Green
	g/dl	4.02	3.41	4.63	0.31	0.61	
	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Purple
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	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	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Hexokinase
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.17	1.00	1.34	0.09	0.17	Direct Clearance Method
	mg/dl	45.2	38.5	51.9	3.35	6.70	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	403	343	463	30.00	60.00	P->L German methods 37°C
	U/l	214	182	246	16.00	32.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	42	33	51	4.50	9.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.654	0.832	0.04	0.09	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.03	1.79	2.27	0.12	0.24	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.0	44.0	66.0	5.50	11.00	Biuret reaction end point
	g/dl	5.50	4.40	6.60	0.55	1.10	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
	μg/dl	257	203	311	27.00	54.00	
	μmol/l	44.8	35.4	54.2	4.70	9.40	Calculated from Transferrin
	μg/dl	250	198	302	26.00	52.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.7	117	8.15	16.30	
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 no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Purple
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	157	134	180	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	36	52	4.00	8.00	Tris buffer with P5P NVKC 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	47	37	57	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	47	37	57	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	15.1	11.9	18.3	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.883	0.696	1.07	0.09	0.19	
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	
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	98.0	90.2	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.60	3.13	4.07	0.24	0.47	Cholesterol Oxidase - Abell Kendall
	mg/dl	139	121	157	9.00	18.00	


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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.58	3.11	4.05	0.24	0.47	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	145	116	174	14.50	29.00	Jaffe rate blanked
	mg/dl	1.64	1.31	1.97	0.17	0.33	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	64	54	74	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PEGME
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
LD (LDH)	U/l	203	172	234	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	136	109	163	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.82	0.72	0.92	0.05	0.10	Methylthymol blue
	mg/dl	1.99	1.75	2.23	0.12	0.24	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.43	3.75	5.11	0.34	0.68	
	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	3.97	3.65	4.29	0.16	0.32	ISE method - indirect

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point	
	g/dl	6.00	4.80	7.20	0.60	1.20		
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect	
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction	
	mg/dl	87.5	73.5	102	7.00	14.00		
	mmol/l	1.00	0.84	1.15	0.08	0.16	L/G Kinase EP. no correction	
	mg/dl	88.1	74.0	102	7.05	14.10		
Urea	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase	
	mg/dl	89.4	75.2	104	7.10	14.20		
	Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease kinetic
		mg/dl	43.5	37.0	50.0	3.25	6.50	
Uric Acid (Urate)	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN	
	mg/dl	20.3	17.3	23.3	1.50	3.00		
	Uric Acid (Urate)	mmol/l	0.34	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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290	
	mg/dl	5.75	5.01	6.49	0.37	0.74		

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Purple
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	47	37	57	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	14.8	11.7	17.9	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.866	0.684	1.05	0.09	0.18	
Bilirubin Total	µmol/l	29.9	23.7	36.1	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.39	2.11	0.18	0.36	
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	97.3	89.5	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.54	3.08	4.00	0.23	0.46	Dimension-Siemens reagents
	mg/dl	137	119	155	9.00	18.00	
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C


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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	μmol/l	142	113	171	14.50	29.00	Enzymatic UV method
	mg/dl	1.60	1.28	1.92	0.16	0.32	
gamma-GT	U/l	64	54	74	5.00	10.00	Siemens Dimension (non IFCC) 37°C
	U/l	64	54	74	5.00	10.00	
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.44	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	1.35	1.15	1.55	0.10	0.20	Direct HDL PEGME
	mg/dl	52.1	44.4	59.8	3.85	7.70	
Iron	μmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	μg/dl	103	84.4	122	9.30	18.60	
LD (LDH)	U/l	205	174	236	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	135	108	162	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.80	0.70	0.90	0.05	0.10	Methylthymol blue
	mg/dl	1.94	1.71	2.17	0.12	0.23	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect

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

Lot. No. 1416UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.3	73.4	101	6.95	13.90	
	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase
Urea	mg/dl	89.4	74.9	104	7.25	14.50	Urease end point
	mmol/l	7.59	6.45	8.73	0.57	1.14	
	mg/dl	45.6	38.8	52.4	3.40	6.80	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
mg/dl	5.68	4.94	6.42	0.37	0.74		