

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

CAT. NO. HNI530	LOT NO. 1005UN
GTIN: 05055273203783	
CAT. NO. HS2611	
GTIN: 05055273203813	
SIZE: 20 x 5ml / 5 x 5ml	EXPIRY: 2018-12-28

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 (25 - 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.

1. 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.
2. Refer to the Control section of the individual analyser application.
3. 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.

Rev. 09 Aug '16 ne

ABBOTT AEROSET®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	27.8	22.0	33.6	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	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	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	ISE direct
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	116	92.9	139	11.55	23.10	Alkaline picrate no deproteinization
	mg/dl	1.31	1.05	1.57	0.13	0.26	
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	μmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	μg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - direct
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	141	133	149	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Urea	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease hypochlorite
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

Abbott Architect c/ci Systems®

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.7	48.1	3.10	6.20	Bromocresol Green
	g/dl	4.19	3.57	4.81	0.31	0.62	
	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	148	126	170	11.00	22.00	AMP optimised to NVKC/SFBC 37°C
	U/l	150	128	172	11.00	22.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	27.2	21.7	32.7	2.75	5.50	Enzymatic Colorimetric
Bicarbonate	mmol/l	11.7	9.30	14.1	1.20	2.40	Enzymatic
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.9	15.0	22.8	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.0	19.7	30.3	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	μmol/l	26.7	21.1	32.3	2.80	5.60	Diazonium ion
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE indirect
Cholinesterase	U/l	6865	5492	8238	686.50	1373.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC serum start (DGKC) 37°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	121	96.9	145	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	127	101	153	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	μmol/l	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	μmol/l	120	96.1	144	11.95	23.90	Jaffe rate blanked
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	μmol/l	119	95.1	143	11.95	23.90	IDMS traceable
	mg/dl	1.34	1.07	1.61	0.14	0.27	
Free T4	pmol/l	17.1	12.8	21.4	2.15	4.30	Abbott Architect
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Abbott Architect

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	43	57	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.03	5.12	6.94	0.46	0.91	Hexokinase
	mg/dl	109	92.3	126	8.35	16.70	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL PPD
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct Clearance Method
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	mmol/l	1.54	1.31	1.77	0.12	0.23	HDL - Ultra
	mg/dl	59.4	50.6	68.2	4.40	8.80	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
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	209	178	240	15.50	31.00	L->P 37°C
	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.623	0.793	0.04	0.09	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Arsenazo III
	mg/dl	2.11	1.85	2.37	0.13	0.26	

Abbott Architect c/ci Systems®

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Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.87	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.08	3.76	4.40	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction kinetic
	g/dl	6.00	4.80	7.20	0.60	1.20	
PSA Total	ng/ml =	13.3	9.96	16.6	1.67	3.34	Abbott Architect
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.15	0.92	1.38	0.11	0.23	Abbott Architect
TIBC	µmol/l	44.0	34.7	53.3	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	246	194	298	26.00	52.00	
Total T3	nmol/l	2.66	2.00	3.32	0.33	0.66	Abbott Architect
	ng/ml	1.73	1.30	2.16	0.22	0.43	
	ng/dl	173	130	216	21.50	43.00	Abbott Architect

Abbott Architect c/ci Systems®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	78.4	58.8	98.0	9.80	19.60	Abbott Architect
	µg/dl	6.12	4.59	7.65	0.77	1.53	
	ng/ml	61.2	45.9	76.5	7.65	15.30	Abbott Architect
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	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	77.9	108	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
Uric Acid (Urate)	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.3	107	7.35	14.70	
	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	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
Urea	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Green
	g/dl	4.16	3.53	4.79	0.32	0.63	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	47	37	57	5.00	10.00	Tris buffer without P5P 37°C
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	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Iron	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Protein Total	g/l	62.5	50.0	75.0	6.25	12.50	Biuret reaction end point
	g/dl	6.25	5.00	7.50	0.63	1.25	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.44	4.74	6.14	0.35	0.70	

Beckman Coulter AU Series®

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		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	
	g/l	46.1	39.2	53.0	3.45	6.90	Bromocresol Purple
	g/dl	4.61	3.92	5.30	0.35	0.69	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	p-Nitrophenylphosphate AMP 37°C
	U/l	120	102	138	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	pNP Maltotrioxide substrates 37°C
	U/l	86	73	99	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	85	73	97	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.9	10.3	15.5	1.30	2.60	Enzymatic
Bilirubin Direct	µmol/l	20.1	15.9	24.3	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	29.7	23.5	35.9	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.37	2.11	0.19	0.37	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	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	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.25	2.02	2.48	0.12	0.23	NM-BAPTA
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.06	3.54	4.58	0.26	0.52	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	97.2	89.5	105	3.85	7.70	ISE indirect
Cholinesterase	U/l	5254	4203	6305	525.50	1051.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	16.2	12.9	19.5	1.65	3.30	Colorimetric
	µg/dl	103	82.0	124	10.50	21.00	
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	125	99.9	150	12.55	25.10	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	118	94.7	141	11.65	23.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	117	93.9	140	11.55	23.10	IDMS traceable
	mg/dl	1.32	1.06	1.58	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.06	5.15	6.97	0.46	0.91	Hexokinase
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose oxidase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	52.9	44.8	61.0	4.05	8.10	
	mmol/l	1.56	1.32	1.80	0.12	0.24	Direct Clearance Method
	mg/dl	60.2	51.0	69.4	4.60	9.20	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P 37°C
	U/l	465	395	535	35.00	70.00	P->L Scandinavian & Dutch 37°C
	U/l	410	349	471	30.50	61.00	P->L German methods 37°C
	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	29	24	34	2.50	5.00	Other Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.08	0.06	0.12	Spectrophotometric
	mg/dl	0.670	0.590	0.750	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.62	3.94	5.30	0.34	0.68	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.8	47.1	70.5	5.85	11.70	Biuret reaction end point
	g/dl	5.88	4.71	7.05	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	46.3	36.6	56.0	4.85	9.70	FE+UIBC(saturation with iron)
	μg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	83.7	116	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.44	6.33	8.55	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.44	6.32	8.56	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.4	37.8	51.0	3.30	6.60	Bromocresol Purple
	g/dl	4.44	3.78	5.10	0.33	0.66	
Alkaline Phosphatase	U/l	172	146	198	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
	U/l	177	150	204	13.50	27.00	AMP optimised to IFCC 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	92	78	106	7.00	14.00	Beckman maltotetraose 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Differential rate pH change
	mmol/l	13.4	10.6	16.2	1.40	2.80	Ion selective electrode
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	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	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
CK Total	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	203	166	240	18.50	37.00	Monothioglycerol 37°C
Creatinine	μmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	121	96.4	146	12.30	24.60	Randox Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	123	98.1	148	12.45	24.90	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	μmol/l	121	96.5	146	12.25	24.50	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.91	5.03	6.79	0.44	0.88	Hexokinase
	mg/dl	106	90.6	121	7.70	15.40	
	mmol/l	5.84	4.96	6.72	0.44	0.88	Glucose oxidase
	mg/dl	105	89.4	121	7.80	15.60	
HDL - Cholesterol	mmol/l	1.71	1.45	1.97	0.13	0.26	Direct HDL PPD
	mg/dl	66.0	56.0	76.0	5.00	10.00	
Iron	μmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	μg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	177	151	203	13.00	26.00	L->P 37°C
	U/l	536	455	617	40.50	81.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.15	1.90	2.40	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	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction CX4/5/7
	g/dl	5.95	4.76	7.14	0.60	1.19	
	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	
	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction kinetic
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.46	4.74	6.18	0.36	0.72	
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 25°C
Bilirubin Total	µmol/l	35.7	28.2	43.2	3.75	7.50	Diazo with Sulphanilic Acid
	mg/dl	2.09	1.65	2.53	0.22	0.44	
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Creatinine	µmol/l	117	93.6	140	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
Glucose	mmol/l	6.30	5.36	7.24	0.47	0.94	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	
Protein Total	g/l	61.5	49.2	73.8	6.15	12.30	Biuret reaction end point
	g/dl	6.15	4.92	7.38	0.62	1.23	
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.7	112	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.18	5.39	6.97	0.40	0.79	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	38.7	32.9	44.5	2.90	5.80	Bromocresol Green
	g/dl	3.87	3.29	4.45	0.29	0.58	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	125	106	144	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	102	87	117	7.50	15.00	AMP optimised to IFCC 25°C
Bilirubin Total	µmol/l	30.3	23.9	36.7	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	118	94.2	142	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.33	1.06	1.60	0.14	0.27	
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method
	mg/dl	56.7	48.3	65.1	4.20	8.40	
LD (LDH)	U/l	471	400	542	35.50	71.00	P->L Scandinavian & Dutch 37°C
	U/l	340	289	391	25.50	51.00	P->L Scandinavian & Dutch 30°C
	U/l	239	203	275	18.00	36.00	P->L Scandinavian & Dutch 25°C

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	7.09	6.02	8.16	0.54	1.07	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.09	6.03	8.15	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
	g/l	41.1	35.0	47.2	3.05	6.10	Turbidimetric Assays
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	120	102	138	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	77	65	89	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.5	9.88	15.1	1.31	2.62	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	μmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	μmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	μmol/l	25.9	20.4	31.4	2.75	5.50	Diazonium ion
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	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	
Cholesterol	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	
	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	98.2	90.3	106	3.95	7.90	ISE indirect
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	118	94.8	141	11.60	23.20	Alkaline picrate with deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	μmol/l	116	92.6	139	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.31	1.05	1.57	0.13	0.26	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	122	97.9	146	12.05	24.10	Creatinine PAP method
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	μmol/l	119	95.1	143	11.95	23.90	Roche Creatinine Plus
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	μmol/l	114	91.5	137	11.25	22.50	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	μmol/l	117	93.2	141	11.90	23.80	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.32	1.05	1.59	0.14	0.27	
	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
Glucose	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
	mmol/l	6.08	5.16	7.00	0.46	0.92	Hexokinase
	mg/dl	110	93.0	127	8.50	17.00	
	mmol/l	5.97	5.08	6.86	0.45	0.89	Glucose oxidase
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PEGME
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	57.1	48.6	65.6	4.25	8.50	
Iron	μmol/l	19.7	16.1	23.3	1.80	3.60	Colorimetric with ppt.
	μg/dl	110	90.0	130	10.00	20.00	
	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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	407	346	468	30.50	61.00	P->L German methods 37°C
	U/l	294	250	338	22.00	44.00	P->L German methods 30°C
	U/l	206	175	237	15.50	31.00	P->L German methods 25°C
	U/l	222	188	256	17.00	34.00	L->P IFCC 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 30°C
	U/l	113	95	131	9.00	18.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.10	0.06	0.12	Ion selective electrode
	mg/dl	0.684	0.601	0.767	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.88	2.38	0.13	0.25	
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	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.06	3.73	4.39	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	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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.5	35.1	53.9	4.70	9.40	FE+UIBC(saturation with iron)
	μg/dl	249	196	302	26.50	53.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.1	111	7.75	15.50	
	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	
	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.1	107	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	6.98	5.93	8.03	0.53	1.05	Urease kinetic
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.98	5.93	8.03	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

ELITech/Vitalab Selectra Pro/E/XL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	263	223	303	20.00	40.00	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	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.31	2.07	2.55	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.26	8.30	10.2	0.48	0.96	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Methylthymol blue
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	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	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	120	95.8	144	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	116	92.8	139	11.60	23.20	Jaffe rate blanked
	mg/dl	1.31	1.05	1.57	0.13	0.26	

ELITech/Vitalab Selectra Pro/E/XL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Glucose oxidase
	mg/dl	112	95.7	128	8.15	16.30	
LD (LDH)	U/l	433	368	498	32.50	65.00	P->L German methods 37°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Protein Total	g/l	62.1	49.6	74.6	6.25	12.50	Biuret reaction end point
	g/dl	6.21	4.96	7.46	0.63	1.25	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	112	95	129	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	72	61	83	5.50	11.00	Roche Integra AMP buffer 25°C
	U/l	170	145	195	12.50	25.00	Randox AMP 37°C
	U/l	132	113	151	9.50	19.00	Randox AMP 30°C
	U/l	109	93	125	8.00	16.00	Randox AMP 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	4.28	2.87	5.69	0.71	1.41	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	5.66	3.79	7.53	0.94	1.87	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	15.8	10.6	21.0	2.60	5.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	8.94	5.99	11.9	1.48	2.95	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	20.1	13.5	26.7	3.30	6.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	14.6	9.78	19.4	2.41	4.82	1-Naphthyl Phosphate substrate Kinetic 37°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
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	5th Generation Colorimetric
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Colorimetric
	mmol/l	12.9	10.2	15.6	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	29.9	23.6	36.2	3.15	6.30	Oxidation to Biliverdin
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.94	8.02	9.86	0.46	0.92	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	94.8	87.3	102	3.75	7.50	ISE indirect
Cholinesterase	U/l	5210	4168	6252	521.00	1042.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	163	233	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	124	102	146	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	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	121	96.8	145	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.5	147	12.25	24.50	Randox Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	Creatinine PAP method
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
	mmol/l	0.26	0.22	0.30	0.02	0.04	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
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	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
	U/l	54	46	62	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
GLDH	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	21	17	25	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
Glucose	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
	mmol/l	6.02	5.11	6.93	0.46	0.91	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
alpha-HBDH	mg/dl	110	93.9	126	8.05	16.10	
	U/l	243	192	294	25.50	51.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	183	145	221	19.00	38.00	Oxobutyrate < 10 mmol/l 30°C
HDL - Cholesterol	U/l	138	109	167	14.50	29.00	Oxobutyrate < 10 mmol/l 25°C
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	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	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	417	355	479	31.00	62.00	P->L German methods 37°C
	U/l	301	256	346	22.50	45.00	P->L German methods 30°C
	U/l	211	180	242	15.50	31.00	P->L German methods 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.681	0.599	0.763	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.88	0.77	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Enzymatic
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Phosphate Inorganic	mmol/l	1.41	1.19	1.63	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.37	3.69	5.05	0.34	0.68	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.5	33.6	51.4	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	78.1	108	7.40	14.80	
	mmol/l	1.05	0.88	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.0	108	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease kinetic
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.42	6.31	8.53	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	165	141	189	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	105	90	120	7.50	15.00	AMP optimised to IFCC 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
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	87.3	80.3	94.3	3.50	7.00	ISE indirect
CK Total	U/l	180	147	213	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	113	92	134	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	62	92	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
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	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	22	32	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 37°C
	U/l	8	6	10	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	6	5	7	0.50	1.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.62	4.78	6.46	0.42	0.84	Hexokinase
	mg/dl	101	86.1	116	7.45	14.90	
	mmol/l	5.98	5.08	6.88	0.45	0.90	Glucose oxidase
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
LD (LDH)	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
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.06	3.44	4.68	0.31	0.62	
Potassium	mmol/l	3.86	3.55	4.17	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	133	126	140	3.50	7.00	ISE method - indirect

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.1	114	8.05	16.10	
	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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.11	6.05	8.17	0.53	1.06	Urease end point
	mg/dl	42.7	36.4	49.0	3.15	6.30	
	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	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	122	103	141	9.50	19.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	22.9	18.1	27.7	2.40	4.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.34	1.06	1.62	0.14	0.28	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.30	2.07	2.53	0.12	0.23	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	3.79	3.30	4.28	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	146	127	165	9.50	19.00	
	mmol/l	3.83	3.34	4.32	0.25	0.49	Vitros DT60/DT60 II
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	102	93.4	111	4.30	8.60	Vitros DT60/DT60 II/DTE II

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5374	4299	6449	537.50	1075.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	172	141	203	15.50	31.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Free T4	pmol/l	32.8	24.6	41.0	4.10	8.20	Vitros ECi
	ng/dl	2.56	1.92	3.20	0.32	0.64	
	pg/ml	25.6	19.2	32.0	3.20	6.40	Vitros ECi
gamma-GT	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	67	57	77	5.00	10.00	Vitros DT60/DT60 II/DTSC II 37°C
Glucose	mmol/l	5.78	4.91	6.65	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	104	88.5	120	7.75	15.50	
	mmol/l	5.77	4.90	6.64	0.44	0.87	Vitros DT60/DT60 II
	mg/dl	104	88.3	120	7.85	15.70	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Vitros Magnetic HDL
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	615	522	708	46.50	93.00	Ortho Vitros Microslide Systems 37°C
	U/l	631	536	726	47.50	95.00	Vitros DT60/DT60 II/DTSC II 37°C
Lipase	U/l	217	174	260	21.50	43.00	Ortho Vitros Microslide Systems 37°C

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.19	1.05	1.33	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.826	0.729	0.923	0.05	0.10	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.15	3.82	4.48	0.17	0.33	Vitros DT60/DT60 II/DTE II
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	
PSA Total	ng/ml =	16.4	12.3	20.5	2.05	4.10	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	142	135	149	3.50	7.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.29	1.03	1.55	0.13	0.26	Vitros ECi
Total T3	nmol/l	3.21	2.41	4.01	0.40	0.80	Vitros ECi
	ng/ml	2.09	1.57	2.61	0.26	0.52	
	ng/dl	209	157	261	26.00	52.00	Vitros ECi
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
	mmol/l	1.20	1.01	1.39	0.10	0.19	Vitros DT60/DT60 II
	mg/dl	106	89.4	123	8.30	16.60	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.44	4.74	6.14	0.35	0.70	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Vitros DT60/DT60 II
	mg/dl	5.51	4.79	6.23	0.36	0.72	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.97	5.92	8.02	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.29	6.20	8.38	0.55	1.09	Vitros DT60/DT60 II
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	6.97	5.92	8.02	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	269	228	310	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	210	178	242	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	172	146	198	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	163	138	188	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	127	108	146	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	104	88	120	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	80	68	92	6.00	12.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	27.0	21.6	32.4	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.0	14.3	21.7	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.837	1.26	0.11	0.21	
Bilirubin Total	µmol/l	23.9	18.9	28.9	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.40	1.11	1.69	0.15	0.29	
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Arsenazo III
	mg/dl	8.98	8.06	9.90	0.46	0.92	

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Lot. No. 1005UN Cat. No. HN1530 / HS2611

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	133	171	9.50	19.00	
Chloride	mmol/l	102	94.0	110	4.00	8.00	ISE direct
CK Total	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.6	150	12.70	25.40	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (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	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
	mmol/l	6.03	5.12	6.94	0.46	0.91	Glucose oxidase
	mg/dl	109	92.3	126	8.35	16.70	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PEGME
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	µmol/l	21.0	17.2	24.8	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	96.1	138	10.45	20.90	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Calmagite
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	

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

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Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - direct
Protein Total	g/l	59.1	47.2	71.0	5.95	11.90	Biuret reaction end point
	g/dl	5.91	4.72	7.10	0.60	1.19	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.97	6.49	0.38	0.76	
Urea	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
	g/l	40.5	34.4	46.6	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.05	3.44	4.66	0.31	0.61	
	g/l	41.2	35.0	47.4	3.10	6.20	Turbidimetric Assays
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	172	146	198	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
	U/l	134	114	154	10.00	20.00	p-Nitrophenylphosphate AMP 30°C
	U/l	110	93	127	8.50	17.00	p-Nitrophenylphosphate AMP 25°C
	U/l	122	103	141	9.50	19.00	Ortho Vitros Microslide Systems 37°C
	U/l	267	227	307	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	208	177	239	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	171	145	197	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	108	92	124	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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
	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	64	55	73	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	65	55	75	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	88	74	102	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	I.L. - blocked pNPG7 37°C
	U/l	71	60	82	5.50	11.00	Randox - Ethylidene pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman maltotetraose 37°C
	U/l	93	79	107	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	92	78	106	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	85	73	97	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C

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Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	81	69	93	6.00	12.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	1.01	0.83	1.19	0.09	0.18	Immunoturbidimetric
	mg/dl	101	82.8	119	9.10	18.20	
Apolipoprotein B	g/l	0.56	0.46	0.66	0.05	0.10	Immunoturbidimetric
	mg/dl	56.3	46.2	66.4	5.05	10.10	
Acid Phosphatase (non-prostatic)	U/l	5.66	3.79	7.53	0.94	1.87	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.28	2.87	5.69	0.71	1.41	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.94	5.99	11.9	1.48	2.95	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.8	10.6	21.0	2.60	5.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.6	9.78	19.4	2.41	4.82	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	20.1	13.5	26.7	3.30	6.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	47	37	57	5.00	10.00	Tris buffer with P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer with P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer with P5P 25°C
	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	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
	U/l	38	30	46	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer SCE 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	26.9	21.5	32.3	2.70	5.40	4th Generation Colorimetric
	µmol/l	23.7	19.0	28.4	2.35	4.70	5th Generation Colorimetric

MEAN OF ALL INSTRUMENTS

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	12.6	10.0	15.2	1.30	2.60	Colorimetric
	mmol/l	14.7	11.7	17.7	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	12.8	10.2	15.4	1.30	2.60	Differential rate pH change
	mmol/l	12.9	10.3	15.5	1.30	2.60	Enzymatic
	mmol/l	13.6	10.8	16.4	1.40	2.80	Ion selective electrode
Bilirubin Direct	μmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	μmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	μmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	μmol/l	18.3	14.5	22.1	1.90	3.80	Oxidation to Biliverdin
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	μmol/l	16.4	13.0	19.8	1.70	3.40	Modified Jendrassik
	mg/dl	0.959	0.761	1.16	0.10	0.20	
	μmol/l	22.9	18.1	27.7	2.40	4.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.34	1.06	1.62	0.14	0.28	
	μmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	μmol/l	34.3	27.1	41.5	3.60	7.20	Diazo with Dichloroaniline (DCA)
	mg/dl	2.01	1.59	2.43	0.21	0.42	
	μmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	μmol/l	28.9	22.8	35.0	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.69	1.33	2.05	0.18	0.36	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	23.9	18.9	28.9	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	29.3	23.2	35.4	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Calcium	μmol/l	33.9	26.8	41.0	3.55	7.10	Modified Jendrassik
	mg/dl	1.98	1.57	2.39	0.21	0.41	
	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	2.29	2.06	2.52	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Methylthymol blue
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Cholesterol	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	
	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	3.79	3.30	4.28	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	146	127	165	9.50	19.00	
Chloride	mmol/l	101	92.9	109	4.05	8.10	Colorimetric
	mmol/l	4.07	3.54	4.60	0.27	0.53	
	mg/dl	157	137	177	10.00	20.00	

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
	mmol/l	98.9	91.0	107	3.95	7.90	ISE direct
Cholinesterase	U/l	5509	4407	6611	551.00	1102.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	198	162	234	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	202	166	238	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	203	166	240	18.50	37.00	Monothioglycerol 37°C
	U/l	127	104	150	11.50	23.00	Monothioglycerol 30°C
	U/l	86	71	101	7.50	15.00	Monothioglycerol 25°C
	U/l	192	157	227	17.50	35.00	Dithioerythritol 37°C
	U/l	120	98	142	11.00	22.00	Dithioerythritol 30°C
	U/l	82	67	97	7.50	15.00	Dithioerythritol 25°C
	U/l	191	157	225	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	120	98	142	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	81	67	95	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.0	12.8	19.2	1.60	3.20	Atomic absorption
	µg/dl	102	81.4	123	10.30	20.60	

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Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Copper	µmol/l	15.8	12.6	19.0	1.60	3.20	Colorimetric
	µg/dl	100	80.1	120	9.95	19.90	
Cortisol	nmol/l	532	399	665	66.50	133.00	Roche Cobas E411
	µg/dl	19.2	14.4	24.0	2.40	4.80	
Creatinine	µmol/l	120	96.0	144	12.00	24.00	Alkaline picrate with deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	123	98.6	147	12.20	24.40	Randox Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Roche Creatinine Plus
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.4	148	12.30	24.60	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	118	94.4	142	11.80	23.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	121	96.7	145	12.15	24.30	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	120	95.8	144	12.10	24.20	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Digoxin	nmol/l	1.81	1.45	2.17	0.18	0.36	Immunoturbidimetric
	ng/ml	1.41	1.13	1.69	0.14	0.28	
Folate	nmol/l	40.6	30.9	50.3	4.85	9.70	Roche Cobas E411
	ng/ml	17.9	13.6	22.2	2.15	4.30	
Free T4	pmol/l	16.9	12.7	21.1	2.10	4.20	Abbott Architect
	ng/dl	1.32	0.991	1.65	0.16	0.33	
	pg/ml	13.2	9.91	16.5	1.65	3.29	Abbott Architect
	pmol/l	17.2	12.9	21.5	2.15	4.30	Siemens Centaur XP/Classic
	ng/dl	1.34	1.01	1.67	0.17	0.33	
	pg/ml	13.4	10.1	16.7	1.65	3.30	Siemens Centaur XP/Classic
	pmol/l	18.6	13.9	23.3	2.35	4.70	BioMerieux Vidas
	ng/dl	1.45	1.08	1.82	0.19	0.37	
	pg/ml	14.5	10.8	18.2	1.85	3.70	BioMerieux Vidas
	pmol/l	32.8	24.6	41.0	4.10	8.20	Vitros ECI
	ng/dl	2.56	1.92	3.20	0.32	0.64	
	pg/ml	25.6	19.2	32.0	3.20	6.40	Vitros ECI
	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Elecsys
	ng/dl	1.65	1.23	2.07	0.21	0.42	
	pg/ml	16.5	12.3	20.7	2.10	4.20	Roche Elecsys
	pmol/l	20.1	15.1	25.1	2.50	5.00	Roche Modular E170
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Roche Modular E170
	pmol/l	20.3	15.2	25.4	2.55	5.10	Roche Cobas E411
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas E411

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	20.1	15.1	25.1	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Roche Cobas 6000/8000
Gentamicin	µmol/l	7.97	6.38	9.56	0.80	1.59	Immunoturbidimetric
	µg/ml	3.81	3.05	4.57	0.38	0.76	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	54	46	62	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	8	6	10	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.78	4.91	6.65	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	104	88.5	120	7.75	15.50	
	mmol/l	5.80	4.93	6.67	0.44	0.87	Glucose dehydrogenase
	mg/dl	105	88.8	121	8.10	16.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
alpha-HBDH	U/l	243	192	294	25.50	51.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	183	145	221	19.00	38.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	138	109	167	14.50	29.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.58	1.35	1.81	0.12	0.23	Direct HDL PPD
	mg/dl	61.0	52.1	69.9	4.45	8.90	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Vitros Magnetic HDL
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	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	1.39	1.18	1.60	0.11	0.21	Direct Clearance Method
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.52	1.30	1.74	0.11	0.22	HDL - Ultra
	mg/dl	58.7	50.2	67.2	4.25	8.50	
Immunoglobulin A	g/l	1.82	1.37	2.27	0.23	0.45	Immunoturbidimetric
	mg/dl	182	137	227	22.50	45.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Immunoglobulin G	g/l	6.22	5.10	7.34	0.56	1.12	Immunoturbidimetric
	mg/dl	622	510	734	56.00	112.00	
Immunoglobulin M	g/l	0.79	0.64	0.95	0.08	0.16	Immunoturbidimetric
	mg/dl	79.4	63.5	95.3	7.95	15.90	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	88.3	126	9.35	18.70	
	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.46	1.19	1.73	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.7	15.7	1.25	2.50	
	mmol/l	1.37	1.12	1.62	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
	mmol/l	1.34	1.10	1.58	0.12	0.24	UV LDH
	mg/dl	12.1	9.91	14.3	1.10	2.19	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	615	522	708	46.50	93.00	Ortho Vitros Microslide Systems 37°C
	U/l	193	164	222	14.50	29.00	L->P 37°C
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	98	83	113	7.50	15.00	L->P 25°C
	U/l	458	390	526	34.00	68.00	P->L Scandinavian & Dutch 37°C
	U/l	331	282	380	24.50	49.00	P->L Scandinavian & Dutch 30°C
	U/l	232	198	266	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	418	356	480	31.00	62.00	P->L German methods 37°C
	U/l	302	257	347	22.50	45.00	P->L German methods 30°C
	U/l	212	180	244	16.00	32.00	P->L German methods 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	416	354	478	31.00	62.00	P->L SFBC 37°C
	U/l	300	256	344	22.00	44.00	P->L SFBC 30°C
	U/l	211	179	243	16.00	32.00	P->L SFBC 25°C
	U/l	211	179	243	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	217	174	260	21.50	43.00	Ortho Vitros Microslide Systems 37°C
	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
	U/l	153	123	183	15.00	30.00	Randox Turbidimetric with colipase 37°C
	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.19	1.05	1.33	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.826	0.729	0.923	0.05	0.10	
	mmol/l	0.99	0.87	1.11	0.06	0.12	Ion selective electrode
	mg/dl	0.687	0.605	0.769	0.04	0.08	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.693	0.610	0.776	0.04	0.08	
	mmol/l	1.06	0.93	1.19	0.06	0.13	Randox Colorimetric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.09	1.84	2.34	0.13	0.25	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.86	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Enzymatic
	mg/dl	2.09	1.84	2.34	0.13	0.25	
NEFA	mmol/l	1.70	1.45	1.95	0.13	0.25	Colorimetric
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
	mOsm/kg	302	242	362	30.00	60.00	Freezing point depression
	mOsm/kg	303	242	364	30.50	61.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.6	9.23	14.0	1.19	2.37	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	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	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.22	3.88	4.56	0.17	0.34	Enzymatic
	mmol/l	3.99	3.67	4.31	0.16	0.32	Flame photometry

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - direct
	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.88	4.70	7.06	0.59	1.18	
	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	46.7	69.9	5.80	11.60	Biuret reaction kinetic
	g/dl	5.83	4.67	6.99	0.58	1.16	
PSA Total	ng/ml =	15.9	11.9	19.9	2.00	4.00	Roche Elecsys Modular E170
	ng/ml =	14.6	11.0	18.2	1.80	3.60	bioMerieux VIDAS TPSA
	ng/ml =	12.0	9.03	15.0	1.49	2.97	Siemens Centaur XP/Classic
	ng/ml =	13.4	10.1	16.7	1.65	3.30	Abbott Architect
	ng/ml =	16.7	12.5	20.9	2.10	4.20	Cobas E411
	ng/ml =	16.4	12.3	20.5	2.05	4.10	Roche Cobas 6000/8000
Salicylate	mmol/l	0.39	0.31	0.46	0.04	0.08	Enzymatic
	mg/dl	5.33	4.26	6.40	0.54	1.07	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	141	134	148	3.50	7.00	Enzymatic
	mmol/l	141	133	149	4.00	8.00	Flame photometry
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Theophylline	μmol/l	28.0	22.4	33.6	2.80	5.60	Immunoturbidimetric
	μg/ml	5.05	4.04	6.06	0.51	1.01	
Thyroid Stimulating Hormone	μU/ml =	1.17	0.93	1.41	0.12	0.24	Abbott Architect
	μU/ml =	1.53	1.22	1.84	0.16	0.31	bioMerieux VIDAS TSH

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.42	1.13	1.71	0.15	0.29	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.67	1.33	2.01	0.17	0.34	Diasorin Liaison
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Vitros ECI
	µU/ml =	1.50	1.20	1.80	0.15	0.30	Roche Elecsys
	µU/ml =	1.57	1.25	1.89	0.16	0.32	Roche Modular E170
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas E411
	µU/ml =	1.55	1.24	1.86	0.16	0.31	Roche Cobas 6000/8000
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Siemens Centaur XP/Classic TSH3-Ultra
TIBC	µmol/l	43.0	34.0	52.0	4.50	9.00	Removal of excess free iron
	µg/dl	240	190	290	25.00	50.00	
	µmol/l	43.9	34.7	53.1	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	245	194	296	25.50	51.00	
	µmol/l	45.2	35.7	54.7	4.75	9.50	Direct Colorimetric
	µg/dl	253	200	306	26.50	53.00	
Tobramycin	µmol/l	51.0	40.3	61.7	5.35	10.70	Randox Direct
	µg/dl	285	225	345	30.00	60.00	
Tobramycin	µmol/l	6.01	4.81	7.21	0.60	1.20	Immunoturbidimetric
	µg/ml	2.81	2.25	3.37	0.28	0.56	
Total T3	nmol/l	2.51	1.89	3.13	0.31	0.62	Abbott Architect
	ng/ml	1.63	1.23	2.03	0.20	0.40	
	ng/dl	163	123	203	20.00	40.00	Abbott Architect
	nmol/l	2.59	1.94	3.24	0.33	0.65	BioMerieux Vidas
	ng/ml	1.69	1.26	2.12	0.22	0.43	
	ng/dl	169	126	212	21.50	43.00	BioMerieux Vidas
	nmol/l	2.26	1.69	2.83	0.29	0.57	Tosoh AIA360
	ng/ml	1.47	1.10	1.84	0.19	0.37	
	ng/dl	147	110	184	18.50	37.00	Tosoh AIA360

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	3.21	2.41	4.01	0.40	0.80	Vitros ECI
	ng/ml	2.09	1.57	2.61	0.26	0.52	
	ng/dl	209	157	261	26.00	52.00	Vitros ECI
	nmol/l	2.74	2.06	3.42	0.34	0.68	Roche Cobas E411
	ng/ml	1.78	1.34	2.22	0.22	0.44	
	ng/dl	178	134	222	22.00	44.00	Roche Cobas E411
	nmol/l	2.85	2.14	3.56	0.36	0.71	Roche Cobas 6000/8000
	ng/ml	1.86	1.39	2.33	0.24	0.47	
Total T4	ng/dl	186	139	233	23.50	47.00	Roche Cobas 6000/8000
	nmol/l	77.5	58.1	96.9	9.70	19.40	Abbott Architect
	µg/dl	6.05	4.53	7.57	0.76	1.52	
	ng/ml	60.5	45.3	75.7	7.60	15.20	Abbott Architect
	nmol/l	78.7	59.0	98.4	9.85	19.70	BioMerieux Vidas
	µg/dl	6.14	4.60	7.68	0.77	1.54	
	ng/ml	61.4	46.0	76.8	7.70	15.40	BioMerieux Vidas
	nmol/l	71.9	53.9	89.9	9.00	18.00	Siemens Immulite 1000
	µg/dl	5.61	4.20	7.02	0.71	1.41	
	ng/ml	56.1	42.0	70.2	7.05	14.10	Siemens Immulite 1000
	nmol/l	85.4	64.0	107	10.70	21.40	Roche Modular E170
	µg/dl	6.66	4.99	8.33	0.84	1.67	
	ng/ml	66.6	49.9	83.3	8.35	16.70	Roche Modular E170
	nmol/l	72.5	54.4	90.6	9.05	18.10	Tosoh AIA360
	µg/dl	5.66	4.24	7.08	0.71	1.42	
	ng/ml	56.6	42.4	70.8	7.10	14.20	Tosoh AIA360

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	85.7	64.3	107	10.70	21.40	Roche Cobas E411
	µg/dl	6.68	5.02	8.34	0.83	1.66	
	ng/ml	66.8	50.2	83.4	8.30	16.60	Roche Cobas E411
	nmol/l	84.4	63.3	106	10.55	21.10	Roche Cobas 6000/8000
	µg/dl	6.58	4.94	8.22	0.82	1.64	
	ng/ml	65.8	49.4	82.2	8.20	16.40	Roche Cobas 6000/8000
	nmol/l	82.8	62.1	104	10.35	20.70	Microgenics DRI assay
	µg/dl	6.46	4.84	8.08	0.81	1.62	
Transferrin	ng/ml	64.6	48.4	80.8	8.10	16.20	Microgenics DRI assay
Transferrin	g/l	1.79	1.43	2.15	0.18	0.36	Immunoturbidimetric
	mg/dl	179	143	215	18.00	36.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.6	111	7.50	15.00	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.3	110	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	80.3	111	7.65	15.30	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	101	84.7	117	8.15	16.30	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.44	4.74	6.14	0.35	0.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.51	4.79	6.23	0.36	0.72	
Urea	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	6.97	5.92	8.02	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease hypochlorite
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	6.47	5.50	7.44	0.49	0.97	Urease Berthelot
	mg/dl	38.9	33.1	44.7	2.90	5.80	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Vitamin B12	pmol/l	459	367	551	46.00	92.00	Roche Cobas E411
	pg/ml	622	497	747	62.50	125.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Zinc	μmol/l	23.7	19.0	28.4	2.35	4.70	Atomic absorption
	μg/dl	155	124	186	15.50	31.00	
	μmol/l	24.6	19.7	29.5	2.45	4.90	Colorimetric with deproteinisation
	μg/dl	161	129	193	16.00	32.00	

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-1-globulin		3.9	3.0	4.8	0.47	0.94	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.2	4.7	7.7	0.75	1.49	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		70.6	63.6	77.6	3.50	7.00	% of total Protein (Beckman Capillary)
beta-globulin		8.8	6.7	10.9	1.06	2.11	% of total Protein (Beckman Capillary)
gamma-globulin		10.5	8.0	13.0	1.26	2.52	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
Alkaline Phosphatase	U/l	260	221	299	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	172	234	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	166	141	191	12.50	25.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC (IFCC) 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	115	92.2	138	11.40	22.80	Alkaline picrate with deproteinization
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	μmol/l	118	94.1	142	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.33	1.06	1.60	0.14	0.27	
	μmol/l	114	91.3	137	11.35	22.70	Randox Enzymatic UV method
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PPD
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct Clearance Method
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	μmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	μg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	420	357	483	31.50	63.00	P->L German methods 37°C
	U/l	303	258	348	22.50	45.00	P->L German methods 30°C
	U/l	213	181	245	16.00	32.00	P->L German methods 25°C
	U/l	397	337	457	30.00	60.00	P->L SFBC 37°C
	U/l	287	243	331	22.00	44.00	P->L SFBC 30°C
	U/l	201	171	231	15.00	30.00	P->L SFBC 25°C
	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	ISE method - direct
Protein Total	g/l	61.2	48.9	73.5	6.15	12.30	Biuret reaction end point
	g/dl	6.12	4.89	7.35	0.62	1.23	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.20	5.39	7.01	0.41	0.81	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease hypochlorite
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
Alkaline Phosphatase	U/l	227	193	261	17.00	34.00	Diethanolamine buffer DEA 37°C
	U/l	177	150	204	13.50	27.00	Diethanolamine buffer DEA 30°C
	U/l	145	123	167	11.00	22.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	17	23	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.9	15.0	22.8	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Creatinine	µmol/l	119	95.0	143	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	μmol/l	124	99.6	148	12.20	24.40	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.40	1.13	1.67	0.14	0.27	
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	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	
LD (LDH)	U/l	412	350	474	31.00	62.00	P->L German methods 37°C
	U/l	297	253	341	22.00	44.00	P->L German methods 30°C
	U/l	209	177	241	16.00	32.00	P->L German methods 25°C
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.0	111	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
Urea	mmol/l	7.52	6.39	8.65	0.57	1.13	Urease kinetic
	mg/dl	45.2	38.4	52.0	3.40	6.80	
	mmol/l	7.52	6.39	8.65	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Green
	g/dl	4.34	3.69	4.99	0.33	0.65	
	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Purple
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	40.8	34.7	46.9	3.05	6.10	Turbidimetric Assays
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	123	105	141	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	79	67	91	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	85	73	97	6.00	12.00	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
Bile Acids	μmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bicarbonate	mmol/l	12.5	9.94	15.1	1.28	2.56	Colorimetric

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Enzymatic
Bilirubin Direct	μmol/l	19.1	15.1	23.1	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	μmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	μmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	μmol/l	25.0	19.8	30.2	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	25.8	20.3	31.3	2.75	5.50	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	92.7	85.3	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5332	4265	6399	533.50	1067.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	125	99.7	150	12.65	25.30	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	127	102	152	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	μmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	123	98.7	147	12.15	24.30	Jaffe rate blanked
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	μmol/l	121	97.2	145	11.90	23.80	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	μmol/l	121	96.8	145	12.10	24.20	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	20.1	15.1	25.1	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Roche Cobas 6000/8000
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Glucose oxidase
	mg/dl	108	91.4	125	8.30	16.60	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL PEGME
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
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	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	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	411	349	473	31.00	62.00	P->L German methods 37°C
	U/l	297	252	342	22.50	45.00	P->L German methods 30°C
	U/l	208	177	239	15.50	31.00	P->L German methods 25°C
	U/l	414	351	477	31.50	63.00	P->L SFBC 37°C
	U/l	299	253	345	23.00	46.00	P->L SFBC 30°C
	U/l	210	178	242	16.00	32.00	P->L SFBC 25°C
	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
Lipase	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.613	0.775	0.04	0.08	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.90	2.40	0.13	0.25	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Osmolality	mOsm/kg	284	228	340	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.31	3.69	4.93	0.31	0.62	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
PSA Total	ng/ml =	16.4	12.3	20.5	2.05	4.10	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.55	1.24	1.86	0.16	0.31	Roche Cobas 6000/8000
TIBC	μmol/l	42.9	33.9	51.9	4.50	9.00	FE+UIBC(saturation with iron)
	μg/dl	240	190	290	25.00	50.00	
Total T3	nmol/l	2.85	2.14	3.56	0.36	0.71	Roche Cobas 6000/8000
	ng/ml	1.86	1.39	2.33	0.24	0.47	
	ng/dl	186	139	233	23.50	47.00	
Total T4	nmol/l	84.4	63.3	106	10.55	21.10	Roche Cobas 6000/8000
	μg/dl	6.58	4.94	8.22	0.82	1.64	
	ng/ml	65.8	49.4	82.2	8.20	16.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.2	107	7.40	14.80	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.44	4.74	6.14	0.35	0.70	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	118	101	135	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	92	79	105	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	75	65	85	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	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
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	19.4	15.3	23.5	2.05	4.10	Roche JG factored
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	18.9	15.0	22.8	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.9	20.5	31.3	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	μmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	μmol/l	25.9	20.5	31.3	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	4.16	3.61	4.71	0.28	0.55	Cholesterol Oxidase
Cholesterol	mg/dl	161	139	183	11.00	22.00	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	117	93.7	140	11.65	23.30	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	μmol/l	118	94.5	142	11.75	23.50	Roche Creatinine Plus
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	μmol/l	117	93.5	141	11.75	23.50	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
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	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
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	
LD (LDH)	U/l	220	187	253	16.50	33.00	L->P IFCC 37°C
	U/l	159	135	183	12.00	24.00	L->P IFCC 30°C
	U/l	112	95	129	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Chlorophosphonazo III
	mg/dl	2.11	1.85	2.37	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	77.8	108	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	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	
Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease hypochlorite
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	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	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
	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	121	103	139	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	77	66	88	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Enzymatic
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.5	20.1	30.9	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	μmol/l	25.8	20.4	31.2	2.70	5.40	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
Chloride	mmol/l	92.6	85.2	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5164	4131	6197	516.50	1033.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	126	101	151	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	128	102	154	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	Hexokinase
	mg/dl	108	92.3	124	7.85	15.70	
	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	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Iron	μmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	μg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	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
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.91	2.45	0.14	0.27	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.11	3.79	4.43	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.1	47.2	71.0	5.95	11.90	Biuret reaction end point
	g/dl	5.91	4.72	7.10	0.60	1.19	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.6	32.8	50.4	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	233	183	283	25.00	50.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	79.1	109	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.87	6.35	0.37	0.74	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	83	70	96	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	68	58	78	5.00	10.00	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 Pancreatic	U/l	65	56	74	4.50	9.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Diazonium ion
	mg/dl	1.45	1.15	1.75	0.15	0.30	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	92.7	85.3	100	3.70	7.40	ISE indirect
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	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	126	100	152	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.13	1.71	0.15	0.29	
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	5.95	5.06	6.84	0.45	0.89	Hexokinase
	mg/dl	107	91.2	123	7.90	15.80	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.4	46.3	62.5	4.05	8.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	μmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	μg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
	U/l	150	128	172	11.00	22.00	L->P IFCC 30°C
	U/l	105	90	120	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.685	0.603	0.767	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	42.4	33.5	51.3	4.45	8.90	FE+UIBC(saturation with iron)
	μg/dl	237	187	287	25.00	50.00	
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.43	4.72	6.14	0.36	0.71	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.38	4.67	6.09	0.36	0.71	
	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.44	4.74	6.14	0.35	0.70	
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	170	145	195	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	18.7	14.8	22.6	1.95	3.90	Vanadate Oxidation
	mg/dl	1.09	0.866	1.31	0.11	0.22	
Bilirubin Total	µmol/l	31.7	25.0	38.4	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Vanadate Oxidation
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.7	88.0	103	3.85	7.70	ISE direct
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	223	183	263	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	117	94.0	140	11.50	23.00	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	μmol/l	122	97.6	146	12.20	24.40	Randox Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
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	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	434	369	499	32.50	65.00	P->L German methods 37°C
	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Colorimetric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.22	3.88	4.56	0.17	0.34	Enzymatic
	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - direct
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	144	137	151	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
TIBC	μmol/l	51.0	40.3	61.7	5.35	10.70	Direct Colorimetric
	μg/dl	285	225	345	30.00	60.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.44	4.74	6.14	0.35	0.70	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Purple
	g/dl	4.43	3.77	5.09	0.33	0.66	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	165	140	190	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.4	11.4	17.4	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.5	22.3	1.95	3.90	Oxidation to Biliverdin
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.71	1.35	2.07	0.18	0.36	
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	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	3.95	3.43	4.47	0.26	0.52	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	99.3	91.4	107	3.95	7.90	ISE indirect
Cholinesterase	U/l	5601	4481	6721	560.00	1120.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	124	98.9	149	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	119	94.8	143	12.10	24.20	Randox Enzymatic UV method
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	μmol/l	121	97.1	145	11.95	23.90	Jaffe rate blanked
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	μmol/l	118	94.4	142	11.80	23.60	Jaffe rate blanked comp. (~26 μmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.90	5.01	6.79	0.45	0.89	Hexokinase
	mg/dl	106	90.3	122	7.85	15.70	
	mmol/l	6.03	5.13	6.93	0.45	0.90	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct Clearance Method
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	μmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	μg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.28	1.05	1.51	0.12	0.23	Colorimetric Lactate Oxidase
	mg/dl	11.5	9.46	13.5	1.02	2.04	
LD (LDH)	U/l	202	171	233	15.50	31.00	L->P 37°C
	U/l	426	362	490	32.00	64.00	P->L German methods 37°C
	U/l	211	179	243	16.00	32.00	L->P IFCC 37°C

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	39	31	47	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.613	0.775	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	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	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	46.2	36.5	55.9	4.85	9.70	FE+UIBC(saturation with iron)
	μg/dl	258	204	312	27.00	54.00	
	μmol/l	49.4	39.0	59.8	5.20	10.40	Direct Colorimetric
	μg/dl	276	218	334	29.00	58.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.35	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	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.6	37.0	50.2	3.30	6.60	Bromocresol Purple
	g/dl	4.36	3.70	5.02	0.33	0.66	
Alkaline Phosphatase	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	46	37	55	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
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	12.8	10.1	15.5	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.749	0.591	0.907	0.08	0.16	
Bilirubin Total	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
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	
Cholesterol	mmol/l	3.44	2.99	3.89	0.23	0.45	Cholesterol Oxidase
	mg/dl	133	115	151	9.00	18.00	
	mmol/l	3.47	3.02	3.92	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	117	151	8.50	17.00	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Hexokinase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct HDL PEGME
	mg/dl	61.0	51.7	70.3	4.65	9.30	
Iron	μmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	μg/dl	99.5	81.6	117	8.95	17.90	
LD (LDH)	U/l	208	177	239	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	142	114	170	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 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	0.85	0.75	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.03	0.87	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.6	106	7.30	14.60	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.6	110	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.51	4.79	6.23	0.36	0.72	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	45.1	38.3	51.9	3.40	6.80	Bromocresol Green
	g/dl	4.51	3.83	5.19	0.34	0.68	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	131	111	151	10.00	20.00	Siemens Dimension AMP buffer 37°C
	U/l	148	126	170	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	153	130	176	11.50	23.00	Randox AMP 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer with P5P 37°C
	U/l	49	39	59	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	96	81	111	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	47	38	56	4.50	9.00	Tris buffer with P5P 37°C
	U/l	48	38	58	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	12.8	10.1	15.5	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.749	0.591	0.907	0.08	0.16	
Bilirubin Total	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
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	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	192	157	227	17.50	35.00	Dithioerythritol 37°C
	U/l	189	155	223	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	μmol/l	134	108	160	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	μmol/l	123	98.3	148	12.35	24.70	Randox Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	μmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	μmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.60	1.36	1.84	0.12	0.24	Direct HDL PPD
	mg/dl	61.8	52.5	71.1	4.65	9.30	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL PEGME
	mg/dl	59.4	50.6	68.2	4.40	8.80	
	mmol/l	1.51	1.29	1.73	0.11	0.22	Direct Clearance Method
	mg/dl	58.3	49.8	66.8	4.25	8.50	
Iron	μmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric with ppt.
	μg/dl	102	83.3	121	9.35	18.70	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	17.9	14.6	21.2	1.65	3.30	Colorimetric without ppt.
	µg/dl	100	81.6	118	9.20	18.40	
LD (LDH)	U/l	217	185	249	16.00	32.00	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	144	115	173	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.1	30.9	47.3	4.10	8.20	Removal of excess free iron
	µg/dl	219	173	265	23.00	46.00	
	µmol/l	41.5	32.8	50.2	4.35	8.70	Direct Colorimetric
	µg/dl	232	183	281	24.50	49.00	
Triglycerides	mmol/l	1.05	0.89	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.3	108	7.30	14.60	
	mmol/l	1.03	0.87	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
	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	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.36	4.65	6.07	0.36	0.71	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.39	4.69	6.09	0.35	0.70	
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease end point
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	13.2	10.5	15.9	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.772	0.614	0.930	0.08	0.16	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
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	
Cholesterol	mmol/l	3.51	3.05	3.97	0.23	0.46	Dimension-Siemens reagents
	mg/dl	135	118	152	8.50	17.00	
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE indirect
CK Total	U/l	192	158	226	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	120	95.8	144	12.10	24.20	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
gamma-GT	U/l	66	56	76	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	5.90	5.02	6.78	0.44	0.88	Hexokinase
	mg/dl	106	90.5	122	7.75	15.50	

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PEGME
	mg/dl	57.9	49.0	66.8	4.45	8.90	
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	1.35	1.11	1.59	0.12	0.24	UV LDH
	mg/dl	12.2	10.0	14.4	1.10	2.20	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	159	127	191	16.00	32.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	61.7	49.4	74.0	6.15	12.30	Biuret reaction end point
	g/dl	6.17	4.94	7.40	0.62	1.23	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.22	1.03	1.41	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	108	91.2	125	8.40	16.80	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.39	4.69	6.09	0.35	0.70	
Urea	mmol/l	7.58	6.45	8.71	0.57	1.13	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.58	6.44	8.72	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

Weiner Lab BT 3000 Plus/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
Alkaline Phosphatase	U/l	263	223	303	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	205	174	236	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	168	142	194	13.00	26.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	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
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Creatinine	µmol/l	118	94.3	142	11.85	23.70	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Triglycerides	mmol/l	0.94	0.79	1.09	0.08	0.15	Lipase/GPO-PAP no correction
	mg/dl	82.9	69.6	96.2	6.65	13.30	

Weiner Lab BT 3000 Plus/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1005UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-12-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	