

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

CAT. NO. HNI530/ HS2611
SIZE: 20 x 5ml / 5 x 5ml

LOT NO. 887UN
EXPIRY: 2018-01

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 -20°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 -20°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 -20°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 5 ml / 5 x 5 ml

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 ± 2 S.D. This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

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

NOTES

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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	40.8	34.6	47.0	3.10	6.20	Bromocresol Purple
	g/dl	4.08	3.46	4.70	0.31	0.62	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	160	136	184	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	22.3	17.6	27.0	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.30	1.03	1.57	0.14	0.27	
	µmol/l	22.3	17.6	27.0	2.35	4.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.30	1.03	1.57	0.14	0.27	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	30.4	24.0	36.8	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	µmol/l	29.3	23.2	35.4	3.05	6.10	Diazonium ion
	mg/dl	1.71	1.36	2.06	0.18	0.35	

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		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.27	2.05	2.49	0.11	0.22	Arsenazo III
	mg/dl	9.10	8.22	9.98	0.44	0.88	
Chloride	mmol/l	103	94.3	112	4.35	8.70	ISE indirect
Cholesterol	mmol/l	3.83	3.34	4.32	0.25	0.49	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	131	104	158	13.50	27.00	Randox Enzymatic UV method
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
Free T4	pmol/l	15.0	11.3	18.7	1.85	3.70	Abbott Architect
	ng/dl	1.17	0.881	1.46	0.14	0.29	
	pg/ml	11.7	8.81	14.6	1.45	2.89	Abbott Architect
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	49	42	56	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.14	5.21	7.07	0.47	0.93	Glucose oxidase
	mg/dl	111	93.9	128	8.55	17.10	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL PPD
	mg/dl	46.3	39.4	53.2	3.45	6.90	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct Clearance Method
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.22	1.04	1.40	0.09	0.18	HDL - Ultra
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric with ppt.
	µg/dl	101	82.2	120	9.40	18.80	
	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	228	194	262	17.00	34.00	L->P 37°C
	U/l	229	195	263	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.90	1.16	0.06	0.13	Spectrophotometric
	mg/dl	0.715	0.628	0.802	0.04	0.09	
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Arsenazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
	mmol/l	0.93	0.81	1.04	0.06	0.11	Enzymatic
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect

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		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Protein Total	g/l	62.0	49.6	74.4	6.20	12.40	Biuret reaction end point
	g/dl	6.20	4.96	7.44	0.62	1.24	
	g/l	62.0	49.6	74.4	6.20	12.40	Biuret reaction kinetic
	g/dl	6.20	4.96	7.44	0.62	1.24	
PSA Total	ng/ml =	13.8	10.4	17.2	1.70	3.40	Abbott Architect
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.36	1.09	1.63	0.14	0.27	Abbott Architect
TIBC	µmol/l	50.9	40.2	61.6	5.35	10.70	FE+UIBC(saturation with iron)
	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	81.6	113	7.90	15.80	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.4	112	7.55	15.10	
	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	
Urea	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	97.4	81.4	113	8.00	16.00	
	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	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
Uric Acid (Urate)	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	

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Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	

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Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	39.8	33.8	45.8	3.00	6.00	Bromocresol Green
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	190	162	218	14.00	28.00	p-Nitrophenylphosphate AMP 37°C
	U/l	277	236	318	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	83	70	96	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	10.5	8.33	12.7	1.09	2.17	Enzymatic
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	21.8	17.2	26.4	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.28	1.01	1.55	0.14	0.27	
Bilirubin Total	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	32.2	25.4	39.0	3.40	6.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	31.1	24.6	37.6	3.25	6.50	Oxidation to Biliverdin
	mg/dl	1.82	1.44	2.20	0.19	0.38	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.06	8.14	9.98	0.46	0.92	

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Range

Analyte	unit	target	low	high	1SD	2SD	methods
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	
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE indirect
Cholesterol	mmol/l	3.89	3.38	4.40	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
Cholinesterase	U/l	6615	5292	7938	661.50	1323.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	220	181	259	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	230	188	272	21.00	42.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	129	104	154	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	μmol/l	131	105	157	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	118	94.5	142	11.75	23.50	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	μmol/l	121	97.2	145	11.90	23.80	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	μmol/l	117	93.6	140	11.70	23.40	IDMS traceable
	mg/dl	1.32	1.06	1.58	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.30	0.26	0.35	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.44	5.48	7.40	0.48	0.96	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	0.97	0.82	1.11	0.07	0.15	Direct HDL Immunoseparation
	mg/dl	37.3	31.7	42.9	2.80	5.60	
	mmol/l	1.07	0.91	1.23	0.08	0.16	Direct Clearance Method
	mg/dl	41.3	35.2	47.4	3.05	6.10	
	mmol/l	0.91	0.78	1.05	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	35.2	29.9	40.5	2.65	5.30	
Iron	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric with ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	
	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	231	196	266	17.50	35.00	L->P 37°C
	U/l	492	418	566	37.00	74.00	P->L Scandinavian & Dutch 37°C
	U/l	439	373	505	33.00	66.00	P->L SFBC 37°C
	U/l	232	198	266	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C

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Range

Analyte	unit	target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.692	0.608	0.776	0.04	0.08	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.05	2.63	0.15	0.29	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	138	132	144	3.00	6.00	ISE method - indirect
TIBC	μmol/l	51.5	40.7	62.3	5.40	10.80	FE+UIBC(saturation with iron)
	μg/dl	288	228	348	30.00	60.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	86.8	121	8.60	17.20	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease end point
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.46	6.35	8.57	0.56	1.11	Urease kinetic
	mg/dl	44.8	38.2	51.4	3.30	6.60	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Green
	g/dl	4.17	3.54	4.80	0.32	0.63	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	165	141	189	12.00	24.00	AMP reduced interference 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	53	45	61	4.00	8.00	Immunoinhibition EPS substrate 37°C
	U/l	52	44	60	4.00	8.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Beckman maltotetraose 37°C
	U/l	90	77	103	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	10.7	8.46	12.9	1.12	2.24	Differential rate pH change
	mmol/l	10.1	8.00	12.2	1.05	2.10	Ion selective electrode
Bilirubin Direct	µmol/l	15.7	12.4	19.0	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.24	2.01	2.47	0.12	0.23	Ion selective electrode
	mg/dl	8.98	8.06	9.90	0.46	0.92	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	102	94.2	110	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.46	3.01	3.91	0.23	0.45	Cholesterol Oxidase
	mg/dl	134	116	152	9.00	18.00	
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	224	183	265	20.50	41.00	Monothioglycerol 37°C
Creatinine	µmol/l	123	98.6	147	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	120	96.2	144	11.90	23.80	Randox Enzymatic UV method
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	122	98.0	146	12.00	24.00	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	34	48	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.03	5.13	6.93	0.45	0.90	Oxygen electrode
	mg/dl	109	92.4	126	8.30	16.60	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.09	0.93	1.25	0.08	0.16	Direct HDL PPD
	mg/dl	42.1	35.9	48.3	3.10	6.20	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	190	162	218	14.00	28.00	L->P 37°C
	U/l	612	520	704	46.00	92.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	217	185	249	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Calmagite
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Osmolality	mOsm/kg	282	226	338	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction CX4/5/7
	g/dl	6.11	4.89	7.33	0.61	1.22	
	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	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction kinetic
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
TIBC	µmol/l	56.3	44.4	68.2	5.95	11.90	FE+UIBC(saturation with iron)
	µg/dl	315	248	382	33.50	67.00	
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
	mmol/l	1.20	1.01	1.39	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.68	6.53	8.83	0.58	1.15	Urease end point
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	mmol/l	7.57	6.44	8.70	0.57	1.13	Urease kinetic
	mg/dl	45.5	38.7	52.3	3.40	6.80	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	38.6	32.8	44.4	2.90	5.80	Bromocresol Green
	g/dl	3.86	3.28	4.44	0.29	0.58	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	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	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	35.2	27.8	42.6	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.06	1.63	2.49	0.22	0.43	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	
Protein Total	g/l	60.6	48.4	72.8	6.10	12.20	Biuret reaction end point
	g/dl	6.06	4.84	7.28	0.61	1.22	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	7.69	6.54	8.84	0.58	1.15	Urease kinetic
	mg/dl	46.2	39.3	53.1	3.45	6.90	
	mmol/l	7.69	6.54	8.84	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.60	5.75	7.45	0.43	0.85	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.10	5.31	6.89	0.40	0.79	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	37.0	31.4	42.6	2.80	5.60	Bromocresol Green
	g/dl	3.70	3.14	4.26	0.28	0.56	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	98	83	113	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	36.1	28.5	43.7	3.80	7.60	Diazo with Sulphanilic Acid
	mg/dl	2.11	1.67	2.55	0.22	0.44	
Cholesterol	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	137	113	161	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	93	77	109	8.00	16.00	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	
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Urea	mmol/l	7.79	6.62	8.96	0.59	1.17	Urease kinetic
	mg/dl	46.8	39.8	53.8	3.50	7.00	
	mmol/l	7.79	6.62	8.96	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.57	5.71	7.43	0.43	0.86	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.10	5.31	6.89	0.40	0.79	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	39.8	33.9	45.7	2.95	5.90	Bromocresol Purple
	g/dl	3.98	3.39	4.57	0.30	0.59	
Alkaline Phosphatase	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	71	95	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	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	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	10.2	8.11	12.3	1.05	2.09	Enzymatic
Bilirubin Direct	µmol/l	20.7	16.3	25.1	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	18.2	14.4	22.0	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.842	1.28	0.11	0.22	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	26.6	21.1	32.1	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	μmol/l	26.5	21.0	32.0	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	μmol/l	26.9	21.3	32.5	2.80	5.60	Diazonium ion
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	mmol/l	2.27	2.05	2.49	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.10	8.22	9.98	0.44	0.88	
Calcium	mmol/l	2.27	2.05	2.49	0.11	0.22	NM-BAPTA
	mg/dl	9.10	8.22	9.98	0.44	0.88	
	mmol/l	2.27	2.05	2.49	0.11	0.22	
Chloride	mmol/l	99.5	91.5	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC substrate start (DGKC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC substrate start (DGKC) 25°C
	U/l	230	188	272	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	144	118	170	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	98	80	116	9.00	18.00	CK-NAC (IFCC) 25°C
	U/l	98	80	116	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	119	95.2	143	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	μmol/l	125	99.8	150	12.60	25.20	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	121	96.9	145	12.05	24.10	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	121	96.9	145	12.05	24.10	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Creatinine	µmol/l	121	96.4	146	12.30	24.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	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	6.16	5.23	7.09	0.47	0.93	Glucose dehydrogenase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.29	5.34	7.24	0.48	0.95	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	0.97	0.83	1.12	0.07	0.15	Direct HDL PEGME
	mg/dl	37.6	31.9	43.3	2.85	5.70	
	mmol/l	0.98	0.83	1.12	0.07	0.15	Direct HDL Roche 3rd generation
	mg/dl	37.7	32.0	43.4	2.85	5.70	
	µmol/l	19.0	15.5	22.5	1.75	3.50	
	µg/dl	106	86.6	125	9.70	19.40	
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	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	441	375	507	33.00	66.00	P->L German methods 37°C
	U/l	318	271	365	23.50	47.00	P->L German methods 30°C
	U/l	224	190	258	17.00	34.00	P->L German methods 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
LD (LDH)	U/l	241	205	277	18.00	36.00	L->P IFCC 37°C
	U/l	174	148	200	13.00	26.00	L->P IFCC 30°C
	U/l	122	104	140	9.00	18.00	L->P IFCC 25°C
Lipase	U/l	37	30	44	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Ion selective electrode
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.46	3.81	5.11	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	58.8	47.1	70.5	5.85	11.70	Biuret reaction kinetic
	g/dl	5.88	4.71	7.05	0.59	1.17	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
TIBC	µmol/l	50.5	39.9	61.1	5.30	10.60	FE+UIBC(saturation with iron)
	µg/dl	282	223	341	29.50	59.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.8	117	8.10	16.20	
	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	97.4	82.0	113	7.70	15.40	
Urea	mmol/l	7.10	6.03	8.17	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.2	49.2	3.25	6.50	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	269	213	325	28.00	56.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	203	161	245	21.00	42.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	152	121	183	15.50	31.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	4.85	3.25	6.45	0.80	1.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	6.62	4.44	8.80	1.09	2.18	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	7.48	5.01	9.95	1.24	2.47	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	19.3	12.9	25.7	3.20	6.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	14.1	9.45	18.8	2.33	4.65	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Purple
	g/dl	4.05	3.45	4.65	0.30	0.60	
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
	U/l	162	138	186	12.00	24.00	AMP non-optimised 37°C
	U/l	126	108	144	9.00	18.00	AMP non-optimised 30°C
	U/l	104	88	120	8.00	16.00	AMP non-optimised 25°C
	U/l	173	147	199	13.00	26.00	Randox AMP 37°C
	U/l	135	115	155	10.00	20.00	Randox AMP 30°C
	U/l	111	94	128	8.50	17.00	Randox AMP 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	85	72	98	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
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	9.73	7.72	11.7	1.01	2.01	Colorimetric
	mmol/l	10.2	8.12	12.3	1.04	2.08	Enzymatic
Bile Acids	µmol/l	27.8	22.2	33.4	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	20.9	16.5	25.3	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.22	0.965	1.48	0.13	0.26	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazonium ion
	mg/dl	1.57	1.25	1.89	0.16	0.32	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
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	2.24	2.02	2.46	0.11	0.22	Arsenazo III
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.28	2.05	2.51	0.12	0.23	NM-BAPTA
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.82	3.33	4.31	0.25	0.49	Cholesterol Oxidase
	mg/dl	147	129	165	9.00	18.00	
Cholinesterase	U/l	6741	5393	8089	674.00	1348.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	220	181	259	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	138	113	163	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
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
	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
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.53	5.55	7.51	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
HDL - Cholesterol	mmol/l	0.96	0.82	1.11	0.07	0.14	Direct HDL PEGME
	mg/dl	37.2	31.6	42.8	2.80	5.60	
	mmol/l	0.96	0.82	1.11	0.07	0.15	Direct HDL Roche 3rd generation
	mg/dl	37.1	31.5	42.7	2.80	5.60	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	451	384	518	33.50	67.00	P->L German methods 37°C
	U/l	326	277	375	24.50	49.00	P->L German methods 30°C
	U/l	229	195	263	17.00	34.00	P->L German methods 25°C
	U/l	224	190	258	17.00	34.00	L->P IFCC 37°C
	U/l	162	137	187	12.50	25.00	L->P IFCC 30°C
	U/l	114	96	132	9.00	18.00	L->P IFCC 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Lipase	U/l	34	28	40	3.00	6.00	Other Colorimetric 37°C
	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.677	0.596	0.758	0.04	0.08	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.04	2.58	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.23	1.97	2.49	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.4	37.5	57.3	4.95	9.90	FE+UIBC(saturation with iron)
	μg/dl	265	210	320	27.50	55.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.1	113	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.7	113	7.85	15.70	
Urea	mmol/l	7.57	6.43	8.71	0.57	1.14	Urease kinetic
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

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	
ALT (GPT)	U/l	32	25	39	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	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bilirubin Total	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	
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	
Chloride	mmol/l	99.2	91.3	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.70	3.22	4.18	0.24	0.48	Cholesterol Oxidase
	mg/dl	143	124	162	9.50	19.00	
CK Total	U/l	207	169	245	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	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	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	23	33	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.43	5.46	7.40	0.49	0.97	Hexokinase
	mg/dl	116	98.4	134	8.80	17.60	
	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
LD (LDH)	U/l	456	387	525	34.50	69.00	P->L German methods 37°C
	U/l	329	279	379	25.00	50.00	P->L German methods 30°C
	U/l	231	196	266	17.50	35.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	62.0	49.6	74.4	6.20	12.40	Biuret reaction end point
	g/dl	6.20	4.96	7.44	0.62	1.24	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.14	0.96	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.5	118	8.25	16.50	
Urea	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease end point
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.73	6.57	8.89	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	38.9	33.1	44.7	2.90	5.80	Ortho Vitros Microslide Systems
	g/dl	3.89	3.31	4.47	0.29	0.58	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	11.0	8.74	13.3	1.13	2.26	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	2.40	2.16	2.64	0.12	0.24	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Chloride	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
	mmol/l	105	96.1	114	4.45	8.90	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	3.67	3.19	4.15	0.24	0.48	Ortho Vitros Microslide Systems
	mg/dl	142	123	161	9.50	19.00	
	mmol/l	3.87	3.36	4.38	0.26	0.51	Vitros DT60/DT60 II
	mg/dl	149	130	168	9.50	19.00	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Cholinesterase	U/l	6523	5219	7827	652.00	1304.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	207	170	244	18.50	37.00	Ortho Vitros Microslide Systems 37°C
	U/l	210	172	248	19.00	38.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	129	104	154	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.46	1.18	1.74	0.14	0.28	
Free T4	pmol/l	22.5	16.9	28.1	2.80	5.60	Vitros ECi
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Vitros ECi
gamma-GT	U/l	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.01	5.11	6.91	0.45	0.90	Vitros DT60/DT60 II
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.03	0.87	1.19	0.08	0.16	Vitros Magnetic HDL
	mg/dl	39.8	33.7	45.9	3.05	6.10	
	mmol/l	1.02	0.87	1.17	0.07	0.15	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	39.4	33.6	45.2	2.90	5.80	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Ortho Vitros Microslide Systems
	µg/dl	98.9	81.1	117	8.90	17.80	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	650	553	747	48.50	97.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	202	162	242	20.00	40.00	Ortho Vitros Microslide Systems 37°C

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.20	1.06	1.34	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.833	0.736	0.930	0.05	0.10	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.65	3.97	5.33	0.34	0.68	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Vitros DT60/DT60 II
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.08	3.75	4.41	0.17	0.33	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Ortho Vitros Microslide Systems
	g/dl	6.11	4.89	7.33	0.61	1.22	
PSA Total	ng/ml =	17.1	12.8	21.4	2.15	4.30	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	141	134	148	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 =	1.55	1.24	1.86	0.16	0.31	Vitros ECi
TIBC	μmol/l	53.7	42.5	64.9	5.60	11.20	Ortho Vitros Microslide Systems
	μg/dl	300	238	362	31.00	62.00	
Total T3	nmol/l	3.18	2.38	3.98	0.40	0.80	Vitros ECi
	ng/ml	2.07	1.55	2.59	0.26	0.52	
	ng/dl	207	155	259	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	1.14	0.95	1.33	0.09	0.19	Vitros DT60/DT60 II
	mg/dl	101	84.4	118	8.30	16.60	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	6.78	5.76	7.80	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	7.34	6.24	8.44	0.55	1.10	Vitros DT60/DT60 II
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	6.78	5.76	7.80	0.51	1.02	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.56	4.84	6.28	0.36	0.72	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	38.9	33.0	44.8	2.95	5.90	Bromocresol Green
	g/dl	3.89	3.30	4.48	0.30	0.59	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	111	95	127	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	95	81	109	7.00	14.00	Randox - Ethylidene pNPG7 37°C
	U/l	83	71	95	6.00	12.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.7	19.8	29.6	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
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	
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE direct
Cholesterol	mmol/l	3.73	3.25	4.21	0.24	0.48	Cholesterol Oxidase
	mg/dl	144	125	163	9.50	19.00	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
CK Total	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	145	119	171	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	99	81	117	9.00	18.00	CK-NAC (IFCC) 25°C
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	131	105	157	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	134	107	161	13.50	27.00	Creatinine PAP method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.50	5.52	7.48	0.49	0.98	Hexokinase
	mg/dl	117	99.5	135	8.75	17.50	
	mmol/l	6.39	5.44	7.34	0.48	0.95	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	0.93	0.79	1.07	0.07	0.14	Direct HDL PEGME
	mg/dl	35.8	30.5	41.1	2.65	5.30	
Iron	μmol/l	21.9	17.9	25.9	2.00	4.00	Colorimetric without ppt.
	μg/dl	122	100	144	11.00	22.00	
LD (LDH)	U/l	468	398	538	35.00	70.00	P->L Scandinavian & Dutch 37°C
	U/l	338	287	389	25.50	51.00	P->L Scandinavian & Dutch 30°C
	U/l	237	202	272	17.50	35.00	P->L Scandinavian & Dutch 25°C
Magnesium	mmol/l	1.06	0.93	1.19	0.07	0.13	Calmagite
	mg/dl	2.58	2.26	2.90	0.16	0.32	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.59	3.91	5.27	0.34	0.68	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - direct
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.3	116	7.85	15.70	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.10	5.31	6.89	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.06	5.28	6.84	0.39	0.78	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	269	213	325	28.00	56.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	203	161	245	21.00	42.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	152	121	183	15.50	31.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	6.62	4.44	8.80	1.09	2.18	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.85	3.25	6.45	0.80	1.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	7.48	5.01	9.95	1.24	2.47	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.1	9.45	18.8	2.33	4.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	19.3	12.9	25.7	3.20	6.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Purple
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	38.9	33.1	44.7	2.90	5.80	Ortho Vitros Microslide Systems
	g/dl	3.89	3.31	4.47	0.29	0.58	
	g/l	39.1	33.2	45.0	2.95	5.90	Turbidimetric Assays
	g/dl	3.91	3.32	4.50	0.30	0.59	
Alkaline Phosphatase	U/l	172	147	197	12.50	25.00	p-Nitrophenylphosphate AMP 37°C
	U/l	134	115	153	9.50	19.00	p-Nitrophenylphosphate AMP 30°C
	U/l	110	94	126	8.00	16.00	p-Nitrophenylphosphate AMP 25°C
	U/l	134	114	154	10.00	20.00	Ortho Vitros Microslide Systems 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	268	228	308	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	209	178	240	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	171	146	196	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	111	95	127	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	165	140	190	12.50	25.00	AMP reduced interference 37°C
	U/l	129	109	149	10.00	20.00	AMP reduced interference 30°C
	U/l	105	89	121	8.00	16.00	AMP reduced interference 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer with P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer with P5P 25°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	33	26	40	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	19	29	2.50	5.00	Phosphate buffer DGKC 30°C
	U/l	19	15	23	2.00	4.00	Phosphate buffer DGKC 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	60	51	69	4.50	9.00	Roche liquid stable pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Randox liquid stable pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
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	Siemens - blocked pNPG7 37°C
	U/l	86	73	99	6.50	13.00	I.L. - blocked pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Randox - Ethylidene pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman maltotetraose 37°C
	U/l	93	79	107	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	91	77	105	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	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
	U/l	82	70	94	6.00	12.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	83	70	96	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	1.25	1.03	1.47	0.11	0.22	Immunoturbidimetric
	mg/dl	125	103	147	11.00	22.00	
Apolipoprotein B	g/l	0.74	0.60	0.87	0.07	0.13	Immunoturbidimetric
	mg/dl	73.6	60.4	86.8	6.60	13.20	
AST (GOT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
	U/l	32	26	38	3.00	6.00	Tris buffer SCE 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	9.90	7.85	12.0	1.03	2.05	Colorimetric
	mmol/l	11.0	8.74	13.3	1.13	2.26	Ortho Vitros Microslide Systems
	mmol/l	10.7	8.46	12.9	1.12	2.24	Differential rate pH change
	mmol/l	10.4	8.27	12.5	1.07	2.13	Enzymatic
	mmol/l	10.3	8.16	12.4	1.07	2.14	Ion selective electrode
Bile Acids	μmol/l	25.1	20.1	30.1	2.50	5.00	4th Generation Colorimetric
	μmol/l	27.8	22.2	33.4	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	μmol/l	21.7	17.2	26.2	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	μmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	μmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	μmol/l	18.2	14.4	22.0	1.90	3.80	Oxidation to Biliverdin
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	μmol/l	20.1	15.9	24.3	2.10	4.20	Modified Jendrassik
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	μmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	μmol/l	27.6	21.8	33.4	2.90	5.80	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	μmol/l	38.4	30.3	46.5	4.05	8.10	Diazo with Dichloroaniline (DCA)
	mg/dl	2.25	1.77	2.73	0.24	0.48	
	μmol/l	29.6	23.3	35.9	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	μmol/l	30.7	24.3	37.1	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	μmol/l	26.8	21.2	32.4	2.80	5.60	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	μmol/l	30.9	24.4	37.4	3.25	6.50	Oxidation to Biliverdin
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	μmol/l	37.4	29.5	45.3	3.95	7.90	Modified Jendrassik
	mg/dl	2.19	1.73	2.65	0.23	0.46	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.32	2.09	2.55	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Ion selective electrode
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.41	2.16	2.66	0.13	0.25	Methylthymol blue
	mg/dl	9.66	8.66	10.7	0.50	1.00	
	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.27	2.04	2.50	0.12	0.23	NM-BAPTA
	mg/dl	9.10	8.18	10.0	0.46	0.92	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Chloride	mmol/l	102	93.8	110	4.10	8.20	Colorimetric
	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect
	mmol/l	101	93.0	109	4.00	8.00	ISE direct
Cholesterol	mmol/l	3.67	3.19	4.15	0.24	0.48	Ortho Vitros Microslide Systems
	mg/dl	142	123	161	9.50	19.00	
	mmol/l	3.82	3.32	4.32	0.25	0.50	Cholesterol Oxidase
	mg/dl	147	128	166	9.50	19.00	
Cholinesterase	U/l	6710	5368	8052	671.00	1342.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	170	244	18.50	37.00	Ortho Vitros Microslide Systems 37°C
	U/l	220	181	259	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	138	113	163	12.50	25.00	CK-NAC serum start (DGKC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC serum start (DGKC) 25°C
	U/l	221	181	261	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	138	113	163	12.50	25.00	CK-NAC substrate start (DGKC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC substrate start (DGKC) 25°C
	U/l	225	184	266	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	141	115	167	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	96	78	114	9.00	18.00	CK-NAC (IFCC) 25°C
	U/l	224	183	265	20.50	41.00	Monothioglycerol 37°C
	U/l	140	115	165	12.50	25.00	Monothioglycerol 30°C
	U/l	95	78	112	8.50	17.00	Monothioglycerol 25°C
	U/l	212	174	250	19.00	38.00	Dithioerythritol 37°C
	U/l	133	109	157	12.00	24.00	Dithioerythritol 30°C
	U/l	90	74	106	8.00	16.00	Dithioerythritol 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	204	167	241	18.50	37.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	128	105	151	11.50	23.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	87	71	103	8.00	16.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	17.7	14.2	21.2	1.75	3.50	Atomic absorption
	µg/dl	113	90.3	136	11.35	22.70	
	µmol/l	18.3	14.6	22.0	1.85	3.70	Colorimetric
	µg/dl	116	92.9	139	11.55	23.10	
Cortisol	nmol/l	553	415	691	69.00	138.00	Roche Cobas E411
	µg/dl	19.9	14.9	24.9	2.50	5.00	
Creatinine	µmol/l	124	99.3	149	12.35	24.70	Alkaline picrate with deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	131	104	158	13.50	27.00	Creatinine PAP method
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Creatinine	μmol/l	122	98.0	146	12.00	24.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	μmol/l	129	104	154	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	μmol/l	123	98.6	147	12.20	24.40	IDMS traceable
	mg/dl	1.39	1.11	1.67	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.08	1.66	2.50	0.21	0.42	Immunoturbidimetric
	ng/ml	1.62	1.30	1.94	0.16	0.32	
Folate	nmol/l	41.9	31.8	52.0	5.05	10.10	Roche Cobas E411
	ng/ml	18.5	14.0	23.0	2.25	4.50	
Free T4	pmol/l	15.1	11.3	18.9	1.90	3.80	Abbott Architect
	ng/dl	1.18	0.881	1.48	0.15	0.30	
	pg/ml	11.8	8.81	14.8	1.50	2.99	Abbott Architect
	pmol/l	15.5	11.7	19.3	1.90	3.80	Siemens Advia Centaur
	ng/dl	1.21	0.913	1.51	0.15	0.30	
	pg/ml	12.1	9.13	15.1	1.49	2.97	Siemens Advia Centaur
	pmol/l	15.2	11.4	19.0	1.90	3.80	Siemens Immulite 2000/2500
	ng/dl	1.19	0.889	1.49	0.15	0.30	
	pg/ml	11.9	8.89	14.9	1.51	3.01	Siemens Immulite 2000/2500
	pmol/l	22.5	16.9	28.1	2.80	5.60	Vitros ECI
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Vitros ECI
	pmol/l	19.1	14.3	23.9	2.40	4.80	Roche Elecsys
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Roche Elecsys

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Free T4	pmol/l	17.8	13.4	22.2	2.20	4.40	Roche Modular E170
	ng/dl	1.39	1.05	1.73	0.17	0.34	
	pg/ml	13.9	10.5	17.3	1.70	3.40	Roche Modular E170
	pmol/l	18.0	13.5	22.5	2.25	4.50	Roche Cobas E411
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Roche Cobas E411
	pmol/l	17.9	13.4	22.4	2.25	4.50	Roche Cobas 6000/8000
	ng/dl	1.40	1.05	1.75	0.18	0.35	
Gentamicin	µmol/l	8.24	6.59	9.89	0.83	1.65	Immunoturbidimetric
	µg/ml	3.94	3.15	4.73	0.40	0.79	
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	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	2.00	4.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	1.50	3.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.36	5.40	7.32	0.48	0.96	Glucose dehydrogenase
	mg/dl	115	97.3	133	8.85	17.70	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.10	5.18	7.02	0.46	0.92	Oxygen electrode
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.06	0.90	1.22	0.08	0.16	Direct HDL PPD
	mg/dl	40.9	34.9	46.9	3.00	6.00	
	mmol/l	0.98	0.84	1.13	0.07	0.15	Direct HDL Immunoseparation
	mg/dl	37.9	32.2	43.6	2.85	5.70	
	mmol/l	0.95	0.81	1.09	0.07	0.14	Direct HDL PEGME
	mg/dl	36.7	31.2	42.2	2.75	5.50	
	mmol/l	1.04	0.88	1.20	0.08	0.16	Direct Clearance Method
	mg/dl	40.1	34.0	46.2	3.05	6.10	
	mmol/l	1.02	0.87	1.17	0.07	0.15	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	39.4	33.6	45.2	2.90	5.80	
	mmol/l	0.96	0.81	1.10	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	36.9	31.3	42.5	2.80	5.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.23	1.04	1.42	0.10	0.19	HDL - Ultra
	mg/dl	47.5	40.1	54.9	3.70	7.40	
Immunoglobulin A	g/l	2.26	1.70	2.82	0.28	0.56	Immunoturbidimetric
	mg/dl	226	170	282	28.00	56.00	
Immunoglobulin G	g/l	7.81	6.40	9.22	0.71	1.41	Immunoturbidimetric
	mg/dl	781	640	922	70.50	141.00	
Immunoglobulin M	g/l	0.91	0.73	1.09	0.09	0.18	Immunoturbidimetric
	mg/dl	90.6	72.5	109	9.05	18.10	
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	
	μmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	μg/dl	101	83.3	119	8.85	17.70	
	μmol/l	17.7	14.5	20.9	1.60	3.20	Ortho Vitros Microslide Systems
	μg/dl	98.9	81.1	117	8.90	17.80	
Lactate	mmol/l	1.51	1.23	1.79	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.1	16.1	1.25	2.50	
	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LAP	U/l	21	18	24	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	650	553	747	48.50	97.00	Ortho Vitros Microslide Systems 37°C
	U/l	206	175	237	15.50	31.00	L->P 37°C
	U/l	149	126	172	11.50	23.00	L->P 30°C
	U/l	104	89	119	7.50	15.00	L->P 25°C
	U/l	484	411	557	36.50	73.00	P->L Scandinavian & Dutch 37°C
	U/l	349	297	401	26.00	52.00	P->L Scandinavian & Dutch 30°C
	U/l	245	208	282	18.50	37.00	P->L Scandinavian & Dutch 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	449	381	517	34.00	68.00	P->L German methods 37°C
	U/l	324	275	373	24.50	49.00	P->L German methods 30°C
	U/l	228	193	263	17.50	35.00	P->L German methods 25°C
	U/l	460	391	529	34.50	69.00	P->L SFBC 37°C
	U/l	332	282	382	25.00	50.00	P->L SFBC 30°C
	U/l	233	198	268	17.50	35.00	P->L SFBC 25°C
	U/l	229	195	263	17.00	34.00	L->P IFCC 37°C
	U/l	165	141	189	12.00	24.00	L->P IFCC 30°C
	U/l	116	99	133	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	202	162	242	20.00	40.00	Ortho Vitros Microslide Systems 37°C
	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
	U/l	174	140	208	17.00	34.00	Randox Turbidimetric with colipase 37°C
	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.20	1.06	1.34	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.833	0.736	0.930	0.05	0.10	
	mmol/l	1.04	0.91	1.17	0.06	0.13	Ion selective electrode
	mg/dl	0.722	0.635	0.809	0.04	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
	mmol/l	1.04	0.92	1.17	0.06	0.13	Randox Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Arsenazo III
	mg/dl	2.28	2.01	2.55	0.14	0.27	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.30	2.02	2.58	0.14	0.28	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Calmagite
	mg/dl	2.34	2.06	2.62	0.14	0.28	
	mmol/l	0.95	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.95	0.84	1.07	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.31	2.03	2.59	0.14	0.28	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Enzymatic
	mg/dl	2.25	1.98	2.52	0.14	0.27	
NEFA	mmol/l	0.90	0.77	1.04	0.07	0.14	Colorimetric
Osmolality	mOsm/kg	283	226	340	28.50	57.00	Calculated
	mOsm/kg	297	238	356	29.50	59.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.10	0.01	0.02	Colorimetric
	mg/l	12.0	9.53	14.5	1.24	2.47	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.65	3.97	5.33	0.34	0.68	
	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	1.40	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	4.10	3.77	4.43	0.17	0.33	Ortho Vitros Microslide Systems

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	Enzymatic
	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - direct
	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Ortho Vitros Microslide Systems
	g/dl	6.11	4.89	7.33	0.61	1.22	
	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction kinetic
PSA Total	g/dl	5.95	4.76	7.14	0.60	1.19	
	ng/ml =	14.1	10.6	17.6	1.75	3.50	Siemens Immulite 1000
	ng/ml =	15.0	11.3	18.7	1.85	3.70	Roche Cobas Core EIA
	ng/ml =	16.8	12.6	21.0	2.10	4.20	Roche Elecsys Modular E170
	ng/ml =	15.3	11.4	19.2	1.95	3.90	bioMerieux VIDAS TPSA
	ng/ml =	13.2	9.92	16.5	1.64	3.28	Siemens Advia Centaur
	ng/ml =	13.7	10.3	17.1	1.70	3.40	Abbott Architect
	ng/ml =	18.0	13.5	22.5	2.25	4.50	Cobas E411
Salicylate	ng/ml =	17.4	13.1	21.7	2.15	4.30	Roche Cobas 6000/8000
	ng/ml =	17.1	12.8	21.4	2.15	4.30	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	0.41	0.33	0.49	0.04	0.08	Enzymatic
	mg/dl	5.69	4.55	6.83	0.57	1.14	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	138	131	145	3.50	7.00	ISE method - direct
	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	29.2	23.4	35.0	2.90	5.80	Immunoturbidimetric
	µg/ml	5.26	4.22	6.30	0.52	1.04	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.30	1.04	1.56	0.13	0.26	Abbott Architect
	µU/ml =	1.58	1.26	1.90	0.16	0.32	Siemens Advia Centaur
	µU/ml =	1.51	1.21	1.81	0.15	0.30	Siemens ADVIA Centaur 3rd Generation
	µU/ml =	1.50	1.20	1.80	0.15	0.30	Siemens Immulite 1000
	µU/ml =	1.68	1.35	2.01	0.17	0.33	Siemens Immulite 2000/2500
	µU/ml =	1.55	1.24	1.86	0.16	0.31	Vitros ECI
	µU/ml =	1.74	1.39	2.09	0.18	0.35	Roche Elecsys
	µU/ml =	1.83	1.46	2.20	0.19	0.37	Roche Modular E170
	µU/ml =	1.82	1.46	2.18	0.18	0.36	Roche Cobas E411
	µU/ml =	1.83	1.46	2.20	0.19	0.37	Roche Cobas 6000/8000
TIBC	µmol/l	53.7	42.5	64.9	5.60	11.20	Ortho Vitros Microslide Systems
	µg/dl	300	238	362	31.00	62.00	
	µmol/l	50.8	40.1	61.5	5.35	10.70	Removal of excess free iron
	µg/dl	284	224	344	30.00	60.00	
	µmol/l	50.2	39.6	60.8	5.30	10.60	FE+UIBC(saturation with iron)
	µg/dl	281	221	341	30.00	60.00	
	µmol/l	52.4	41.4	63.4	5.50	11.00	Direct Colorimetric
	µg/dl	293	231	355	31.00	62.00	
	µmol/l	57.1	45.1	69.1	6.00	12.00	Randox Direct
	µg/dl	319	252	386	33.50	67.00	
Tobramycin	µmol/l	5.73	4.58	6.88	0.58	1.15	Immunoturbidimetric
	µg/ml	2.68	2.14	3.22	0.27	0.54	
Total T3	nmol/l	2.46	1.84	3.08	0.31	0.62	Abbott Architect
	ng/ml	1.60	1.20	2.00	0.20	0.40	
	ng/dl	160	120	200	20.00	40.00	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Total T3	nmol/l	3.18	2.38	3.98	0.40	0.80	Vitros ECI
	ng/ml	2.07	1.55	2.59	0.26	0.52	
	ng/dl	207	155	259	26.00	52.00	Vitros ECI
	nmol/l	3.02	2.26	3.78	0.38	0.76	Roche Cobas E411
	ng/ml	1.97	1.47	2.47	0.25	0.50	
	ng/dl	197	147	247	25.00	50.00	Roche Cobas E411
Total T4	nmol/l	80.3	60.2	100	10.05	20.10	Abbott Architect
	µg/dl	6.26	4.70	7.82	0.78	1.56	
	ng/ml	62.6	47.0	78.2	7.80	15.60	Abbott Architect
	nmol/l	80.2	60.2	100	10.00	20.00	Siemens Immulite 1000
	µg/dl	6.26	4.70	7.82	0.78	1.56	
	ng/ml	62.6	47.0	78.2	7.80	15.60	Siemens Immulite 1000
	nmol/l	84.2	63.2	105	10.50	21.00	Siemens Immulite 2000/2500
	µg/dl	6.57	4.93	8.21	0.82	1.64	
	ng/ml	65.7	49.3	82.1	8.20	16.40	Siemens Immulite 2000/2500
	nmol/l	86.2	64.7	108	10.75	21.50	Roche Modular E170
	µg/dl	6.72	5.05	8.39	0.84	1.67	
	ng/ml	67.2	50.5	83.9	8.35	16.70	Roche Modular E170
Transferrin	nmol/l	88.2	66.2	110	11.00	22.00	Roche Cobas E411
	µg/dl	6.88	5.16	8.60	0.86	1.72	
	ng/ml	68.8	51.6	86.0	8.60	17.20	Roche Cobas E411
Triglycerides	g/l	2.41	1.93	2.89	0.24	0.48	Immunoturbidimetric
	mg/dl	241	193	289	24.00	48.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.4	114	7.90	15.80	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.8	117	8.10	16.20	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	80.9	112	7.80	15.60	
Urea	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	6.78	5.76	7.80	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	7.45	6.34	8.56	0.56	1.11	Urease end point
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	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	7.32	6.22	8.42	0.55	1.10	Urease hypochlorite
	mg/dl	44.0	37.4	50.6	3.30	6.60	
Uric Acid (Urate)	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease Berthelot
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.56	4.84	6.28	0.36	0.72	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Vitamin B12	pmol/l	562	450	674	56.00	112.00	Roche Cobas E411
	pg/ml	762	610	914	76.00	152.00	
Zinc	µmol/l	21.7	17.4	26.0	2.15	4.30	Atomic absorption
	µg/dl	142	114	170	14.00	28.00	
	µmol/l	21.8	17.4	26.2	2.20	4.40	Colorimetric with deproteinisation
	µg/dl	142	114	170	14.00	28.00	

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		62.6	56.4	68.8	3.10	6.20	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.5	4.9	8.1	0.78	1.56	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.0	5.3	8.7	0.84	1.68	% of total Protein (Beckman Capillary)
beta-globulin		10.4	7.9	12.9	1.25	2.50	% of total Protein (Beckman Capillary)
gamma-globulin		13.5	10.3	16.7	1.60	3.20	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Green
	g/dl	4.17	3.55	4.79	0.31	0.62	
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	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	106	90	122	8.00	16.00	AMP optimised to IFCC 25°C
Calcium	mmol/l	2.45	2.20	2.70	0.13	0.25	Cresolphthalein complexone
	mg/dl	9.82	8.82	10.8	0.50	1.00	
	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	3.81	3.31	4.31	0.25	0.50	Cholesterol Oxidase
	mg/dl	147	128	166	9.50	19.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	137	113	161	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	93	77	109	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.51	5.53	7.49	0.49	0.98	Glucose oxidase
	mg/dl	117	99.7	134	8.65	17.30	
HDL - Cholesterol	mmol/l	1.08	0.92	1.24	0.08	0.16	Direct HDL PPD
	mg/dl	41.7	35.4	48.0	3.15	6.30	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.62	1.37	1.87	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.02	4.25	5.79	0.39	0.77	
Protein Total	g/l	62.6	50.1	75.1	6.25	12.50	Biuret reaction end point
	g/dl	6.26	5.01	7.51	0.63	1.25	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.9	120	8.55	17.10	
Urea	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.78	6.61	8.95	0.59	1.17	Urease kinetic
	mg/dl	46.8	39.7	53.9	3.55	7.10	
	mmol/l	7.78	6.61	8.95	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.54	5.68	7.40	0.43	0.86	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
Bilirubin Total	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.33	2.09	2.57	0.12	0.24	Arsenazo III
	mg/dl	9.34	8.38	10.3	0.48	0.96	
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	124	99.5	149	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Glucose oxidase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	0.99	0.84	1.13	0.07	0.15	Direct HDL Immunoseparation
	mg/dl	38.1	32.3	43.9	2.90	5.80	
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

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	82.2	114	8.00	16.00	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.19	6.77	0.40	0.79	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Purple
	g/dl	4.08	3.47	4.69	0.31	0.61	
	g/l	39.8	33.8	45.8	3.00	6.00	Turbidimetric Assays
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	131	111	151	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	102	86	118	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	71	97	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	60	51	69	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	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	9.72	7.71	11.7	1.01	2.01	Colorimetric
	mmol/l	10.3	8.17	12.4	1.07	2.13	Enzymatic

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Bile Acids	μmol/l	28.2	22.6	33.8	2.80	5.60	Enzymatic Colorimetric
Bilirubin Direct	μmol/l	22.0	17.4	26.6	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.29	1.02	1.56	0.14	0.27	
	μmol/l	22.0	17.4	26.6	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.29	1.02	1.56	0.14	0.27	
	μmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
Bilirubin Total	μmol/l	26.4	20.8	32.0	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	26.5	20.9	32.1	2.80	5.60	Diazonium ion
	mg/dl	1.55	1.22	1.88	0.17	0.33	
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.10	8.18	10.0	0.46	0.92	
	mmol/l	2.27	2.04	2.50	0.12	0.23	NM-BAPTA
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Chloride	mmol/l	94.8	87.2	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Cholinesterase	U/l	6697	5357	8037	670.00	1340.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	230	188	272	21.00	42.00	CK-NAC substrate start (DGKC) 37°C
	U/l	144	118	170	13.00	26.00	CK-NAC substrate start (DGKC) 30°C
	U/l	98	80	116	9.00	18.00	CK-NAC substrate start (DGKC) 25°C
	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	145	119	171	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	99	81	117	9.00	18.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	μmol/l	136	109	163	13.50	27.00	Randox Enzymatic UV method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	μmol/l	133	107	159	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	129	104	154	12.50	25.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.46	1.18	1.74	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	17.9	13.4	22.4	2.25	4.50	Roche Cobas 6000/8000
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Roche Cobas 6000/8000
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	0.96	0.81	1.10	0.07	0.14	Direct HDL PEGME
	mg/dl	36.9	31.4	42.4	2.75	5.50	
	mmol/l	0.95	0.81	1.09	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	36.6	31.1	42.1	2.75	5.50	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric with ppt.
	µg/dl	101	82.2	120	9.40	18.80	
	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
	mmol/l	0.20	0.16	0.24	0.02	0.04	Enzymatic Electrode
	mg/dl	1.80	1.48	2.12	0.16	0.32	
LD (LDH)	U/l	450	382	518	34.00	68.00	P->L German methods 37°C
	U/l	325	276	374	24.50	49.00	P->L German methods 30°C
	U/l	228	194	262	17.00	34.00	P->L German methods 25°C
	U/l	449	382	516	33.50	67.00	P->L SFBC 37°C
	U/l	324	276	372	24.00	48.00	P->L SFBC 30°C
	U/l	228	194	262	17.00	34.00	P->L SFBC 25°C
	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
	U/l	163	139	187	12.00	24.00	L->P IFCC 30°C
Lipase	U/l	115	97	133	9.00	18.00	L->P IFCC 25°C
	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Ion selective electrode
	mg/dl	0.729	0.642	0.816	0.04	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.622	0.794	0.04	0.09	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
	mmol/l	0.95	0.83	1.06	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Osmolality	mOsm/kg	279	223	335	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.01	3.69	4.33	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	59.8	47.8	71.8	6.00	12.00	Biuret reaction kinetic
	g/dl	5.98	4.78	7.18	0.60	1.20	
PSA Total	ng/ml =	17.4	13.1	21.7	2.15	4.30	Roche Cobas 6000/8000
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.83	1.46	2.20	0.19	0.37	Roche Cobas 6000/8000
TIBC	µmol/l	49.1	38.8	59.4	5.15	10.30	FE+UIBC(saturation with iron)
	µg/dl	274	217	331	28.50	57.00	
	µmol/l	50.3	39.7	60.9	5.30	10.60	Direct Colorimetric
	µg/dl	281	222	340	29.50	59.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	124	105	143	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	97	82	112	7.50	15.00	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	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	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	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.6	16.3	24.9	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.9	22.0	33.8	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.02	8.14	9.90	0.44	0.88	
	mmol/l	2.30	2.07	2.53	0.12	0.23	NM-BAPTA
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	231	189	273	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	145	118	172	13.50	27.00	CK-NAC (IFCC) 30°C
	U/l	98	80	116	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	118	94.7	141	11.65	23.30	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	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	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	120	95.7	144	12.15	24.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.34	5.38	7.30	0.48	0.96	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.43	5.47	7.39	0.48	0.96	Glucose oxidase
	mg/dl	116	98.6	133	8.70	17.40	
HDL - Cholesterol	mmol/l	0.96	0.82	1.11	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	37.1	31.6	42.6	2.75	5.50	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	249	212	286	18.50	37.00	L->P IFCC 37°C
	U/l	180	153	207	13.50	27.00	L->P IFCC 30°C
	U/l	126	107	145	9.50	19.00	L->P IFCC 25°C
Magnesium	mmol/l	0.99	0.87	1.11	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.40	2.11	2.69	0.15	0.29	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.3	118	8.35	16.70	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.2	112	7.65	15.30	
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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
	g/l	41.5	35.2	47.8	3.15	6.30	Bromocresol Purple
	g/dl	4.15	3.52	4.78	0.32	0.63	
Alkaline Phosphatase	U/l	130	110	150	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	70	96	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	25	39	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	18	14	22	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	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	10.5	8.31	12.7	1.10	2.19	Enzymatic
Bilirubin Direct	µmol/l	22.8	18.0	27.6	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Bilirubin Total	µmol/l	24.3	19.2	29.4	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.8	21.1	32.5	2.85	5.70	Diazonium ion
	mg/dl	1.57	1.23	1.91	0.17	0.34	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.27	2.04	2.50	0.12	0.23	NM-BAPTA
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Chloride	mmol/l	94.6	87.0	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
CK Total	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	145	119	171	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	99	81	117	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Randox Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
gamma-GT	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	0.94	0.80	1.08	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	36.4	30.9	41.9	2.75	5.50	
LD (LDH)	U/l	225	191	259	17.00	34.00	L->P IFCC 37°C
	U/l	162	138	186	12.00	24.00	L->P IFCC 30°C
	U/l	114	97	131	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.95	0.84	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with 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 no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	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	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	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
Amylase Pancreatic	U/l	58	50	66	4.00	8.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	10.4	8.25	12.6	1.08	2.15	Enzymatic
Bile Acids	µmol/l	26.7	21.4	32.0	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	22.0	17.4	26.6	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.29	1.02	1.56	0.14	0.27	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	25.8	20.3	31.3	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.4	20.0	30.8	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.17	1.81	0.16	0.32	
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.06	8.18	9.94	0.44	0.88	
	mmol/l	2.26	2.03	2.49	0.12	0.23	NM-BAPTA
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.78	3.29	4.27	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
CK Total	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	138	110	166	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	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	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	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	0.94	0.80	1.08	0.07	0.14	Direct HDL Roche 3rd generation
	mg/dl	36.1	30.7	41.5	2.70	5.40	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Iron	μmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	μg/dl	98.9	81.1	117	8.90	17.80	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	221	188	254	16.50	33.00	L->P IFCC 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 30°C
	U/l	112	95	129	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	37	30	44	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
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	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	μmol/l	49.3	39.0	59.6	5.15	10.30	FE+UIBC(saturation with iron)
	μg/dl	276	218	334	29.00	58.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.0	115	8.05	16.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	7.18	6.11	8.25	0.54	1.07	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	39.2	33.3	45.1	2.95	5.90	Bromocresol Green
	g/dl	3.92	3.33	4.51	0.30	0.59	
Alkaline Phosphatase	U/l	297	252	342	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	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	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	10.4	8.25	12.6	1.08	2.15	Enzymatic
Bile Acids	µmol/l	27.8	22.2	33.4	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	22.6	17.9	27.3	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.32	1.05	1.59	0.14	0.27	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Vanadate Oxidation
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Vanadate Oxidation
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.36	2.13	2.59	0.12	0.23	Arsenazo III
	mg/dl	9.46	8.54	10.4	0.46	0.92	
Chloride	mmol/l	99.8	91.8	108	4.00	8.00	ISE direct

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	244	200	288	22.00	44.00	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	129	103	155	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.44	5.47	7.41	0.49	0.97	Hexokinase
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
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	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	457	388	526	34.50	69.00	P->L German methods 37°C
	U/l	252	214	290	19.00	38.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.98	0.86	1.10	0.06	0.12	Xylidyl Blue
	mg/dl	2.38	2.09	2.67	0.15	0.29	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	Enzymatic
	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - direct
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	μmol/l	57.1	45.1	69.1	6.00	12.00	Direct Colorimetric
	μg/dl	319	252	386	33.50	67.00	
Triglycerides	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Green
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	175	148	202	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	171	145	197	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	60	51	69	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	11.9	9.40	14.4	1.25	2.50	Enzymatic
Bilirubin Direct	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	30.9	24.4	37.4	3.25	6.50	Oxidation to Biliverdin
	mg/dl	1.81	1.43	2.19	0.19	0.38	
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	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	102	93.7	110	4.15	8.30	ISE indirect
Cholesterol	mmol/l	3.75	3.26	4.24	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC substrate start (DGKC) 37°C

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
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	100	152	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	μmol/l	135	108	162	13.50	27.00	Jaffe rate blanked
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.36	5.41	7.31	0.48	0.95	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	
HDL - Cholesterol	mmol/l	1.02	0.87	1.17	0.08	0.15	Direct HDL Immunoseparation
	mg/dl	39.4	33.4	45.4	3.00	6.00	
	mmol/l	1.01	0.86	1.16	0.08	0.15	Direct Clearance Method
	mg/dl	39.0	33.1	44.9	2.95	5.90	
Iron	μmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	μg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.36	1.12	1.60	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	229	194	264	17.50	35.00	L->P 37°C
	U/l	439	373	505	33.00	66.00	P->L German methods 37°C
	U/l	232	197	267	17.50	35.00	L->P IFCC 37°C

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.93	1.17	0.06	0.12	Spectrophotometric
	mg/dl	0.729	0.644	0.814	0.04	0.09	
Magnesium	mmol/l	0.97	0.86	1.09	0.06	0.12	Xylidyl Blue
	mg/dl	2.36	2.08	2.64	0.14	0.28	
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	4.06	3.73	4.39	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.7	48.6	72.8	6.05	12.10	Biuret reaction end point
	g/dl	6.07	4.86	7.28	0.61	1.21	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	μmol/l	52.2	41.3	63.1	5.45	10.90	FE+UIBC(saturation with iron)
	μg/dl	292	231	353	30.50	61.00	
	μmol/l	55.2	43.6	66.8	5.80	11.60	Direct Colorimetric
	μg/dl	309	244	374	32.50	65.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.6	118	8.20	16.40	
Urea	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.62	6.48	8.76	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.08	5.29	6.87	0.40	0.79	

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.41	2.15	0.19	0.37	
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	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.04	2.64	3.44	0.20	0.40	Dimension-Siemens reagents
	mg/dl	117	102	132	7.50	15.00	
CK Total	U/l	218	178	258	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	141	113	169	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.59	1.28	1.90	0.16	0.31	
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
Magnesium	mmol/l	0.93	0.81	1.04	0.06	0.11	Methylthymol blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
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	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	129	109	149	10.00	20.00	Siemens Dimension AMP buffer 37°C
	U/l	172	146	198	13.00	26.00	Randox AMP 37°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	40	62	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	14.8	11.7	17.9	1.55	3.10	Diazo with Sulphanilic Acid
	mg/dl	0.866	0.684	1.05	0.09	0.18	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.70	7.86	9.54	0.42	0.84	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.07	2.67	3.47	0.20	0.40	Dimension-Siemens reagents
	mg/dl	119	103	135	8.00	16.00	
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
CK Total	U/l	212	174	250	19.00	38.00	Dithioerythritol 37°C
	U/l	212	174	250	19.00	38.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	μmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	126	100	152	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	μmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	141	113	169	14.00	28.00	Jaffe rate blanked
	mg/dl	1.59	1.28	1.90	0.16	0.31	
gamma-GT	μmol/l	139	111	167	14.00	28.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
glucose	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	56	74	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Hexokinase
	mg/dl	115	97.8	132	8.60	17.20	
	mmol/l	6.37	5.41	7.33	0.48	0.96	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	
HDL - Cholesterol	mmol/l	0.93	0.79	1.07	0.07	0.14	Direct HDL PPD
	mg/dl	35.7	30.4	41.0	2.65	5.30	
	mmol/l	0.96	0.82	1.10	0.07	0.14	Direct HDL PEGME
	mg/dl	37.1	31.5	42.7	2.80	5.60	
	mmol/l	0.94	0.80	1.08	0.07	0.14	Direct Clearance Method
Iron	mg/dl	36.2	30.8	41.6	2.70	5.40	
	μmol/l	17.4	14.3	20.5	1.55	3.10	Colorimetric without ppt.
Iron	μg/dl	97.3	79.9	115	8.70	17.40	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
LD (LDH)	U/l	228	194	262	17.00	34.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	230	195	265	17.50	35.00	L->P IFCC 37°C
Lipase	U/l	150	121	179	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Methylthymol blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
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	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	50.4	39.8	61.0	5.30	10.60	Removal of excess free iron
	µg/dl	282	222	342	30.00	60.00	
	µmol/l	49.6	39.2	60.0	5.20	10.40	Direct Colorimetric
	µg/dl	277	219	335	29.00	58.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.6	111	7.50	15.00	
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	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.70	4.96	6.44	0.37	0.74	

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Purple
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	164	140	188	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 37°C
	U/l	39	31	47	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	39	57	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
Bilirubin Direct	µmol/l	15.0	11.8	18.2	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.878	0.690	1.07	0.09	0.19	
Bilirubin Total	µmol/l	29.4	23.2	35.6	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
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	
Chloride	mmol/l	102	93.8	110	4.10	8.20	ISE indirect
Cholesterol	mmol/l	3.02	2.63	3.41	0.20	0.39	Dimension-Siemens reagents
	mg/dl	117	102	132	7.50	15.00	
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	211	173	249	19.00	38.00	Dithioerythritol 37°C
	U/l	198	163	233	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 37°C

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	μmol/l	132	105	159	13.50	27.00	Randox Enzymatic UV method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	μmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	μmol/l	121	96.8	145	12.10	24.20	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	52	72	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	0.88	0.75	1.01	0.07	0.13	Direct HDL PEGME
	mg/dl	34.0	28.9	39.1	2.55	5.10	
	mmol/l	0.92	0.78	1.06	0.07	0.14	HDL - Ultra
	mg/dl	35.5	30.2	40.8	2.65	5.30	
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	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.48	1.21	1.75	0.14	0.27	UV LDH
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	239	203	275	18.00	36.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	233	198	268	17.50	35.00	L->P IFCC 37°C
Lipase	U/l	159	127	191	16.00	32.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.630	0.800	0.04	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	62.9	50.3	75.5	6.30	12.60	Biuret reaction end point
	g/dl	6.29	5.03	7.55	0.63	1.26	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.32	0.28	0.36	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.34	4.65	6.03	0.35	0.69	

VITALAB SELECTRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Green
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	257	219	295	19.00	38.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.33	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	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	122	97.3	147	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	117	93.9	140	11.55	23.10	Jaffe rate blanked
	mg/dl	1.32	1.06	1.58	0.13	0.26	

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Size 20 x 5ml / 5 x 5ml Expiry 2018-01

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.54	5.56	7.52	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Phosphate Inorganic	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	
Protein Total	g/l	64.9	51.9	77.9	6.50	13.00	Biuret reaction end point
	g/dl	6.49	5.19	7.79	0.65	1.30	
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.5	121	8.25	16.50	
Urea	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	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	

Weiner Lab BT 3000 Plus/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	215	182	248	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 30°C
	U/l	137	116	158	10.50	21.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
Cholesterol	mmol/l	3.69	3.21	4.17	0.24	0.48	Cholesterol Oxidase
	mg/dl	142	124	160	9.00	18.00	
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	
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	
Protein Total	g/l	63.7	50.9	76.5	6.40	12.80	Biuret reaction end point
	g/dl	6.37	5.09	7.65	0.64	1.28	
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	

Weiner Lab BT 3000 Plus/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 887UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-01

Range

Analyte	unit	target	low	high	1SD	2SD	methods
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	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.17	5.36	6.98	0.41	0.81	