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

CAT. NO. HN1530 / HS2611 **LOT NO.** 890UN
SIZE: 20 x 5ml / 5 x 5ml **EXPIRY:** 2018-02

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 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

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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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ABBOTT AEROSET®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	22.7	17.9	27.5	2.40	4.80	Diazo with Sulphanilic Acid
	mg/dl	1.33	1.05	1.61	0.14	0.28	
	µmol/l	17.9	14.1	21.7	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
Bilirubin Total	µmol/l	28.7	22.6	34.8	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.32	2.04	0.18	0.36	
	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.90	7.98	9.82	0.46	0.92	
	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.94	4.29	5.59	0.33	0.65	Cholesterol Oxidase
	mg/dl	191	166	216	12.50	25.00	
CK Total	U/l	220	180	260	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	114	91.4	137	11.30	22.60	Alkaline picrate no deproteinization
	mg/dl	1.29	1.03	1.55	0.13	0.26	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.00	5.95	8.05	0.53	1.05	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
HDL - Cholesterol	mmol/l	1.88	1.60	2.16	0.14	0.28	HDL - Ultra
	mg/dl	72.6	61.8	83.4	5.40	10.80	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
LD (LDH)	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - direct
Protein Total	g/l	61.3	49.0	73.6	6.15	12.30	Biuret reaction end point
	g/dl	6.13	4.90	7.36	0.62	1.23	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
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	5.85	5.07	6.63	0.39	0.78	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.45	6.34	8.56	0.56	1.11	Urease hypochlorite
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Purple
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	175	148	202	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	174	148	200	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	28.2	22.6	33.8	2.80	5.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	12.1	9.63	14.6	1.24	2.47	Enzymatic
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.20	0.948	1.45	0.13	0.25	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	29.3	23.2	35.4	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.36	2.06	0.18	0.35	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazonium ion
	mg/dl	1.67	1.32	2.02	0.18	0.35	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	5.09	4.43	5.75	0.33	0.66	Cholesterol Oxidase
	mg/dl	196	171	221	12.50	25.00	
Chloride	mmol/l	97.4	89.7	105	3.85	7.70	ISE indirect
Cholinesterase	U/l	6594	5276	7912	659.00	1318.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	IDMS traceable
	mg/dl	1.44	1.15	1.73	0.15	0.29	
Free T4	pmol/l	18.6	14.0	23.2	2.30	4.60	Abbott Architect
	ng/dl	1.45	1.09	1.81	0.18	0.36	
	pg/ml	14.5	10.9	18.1	1.80	3.60	Abbott Architect
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	48	41	55	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.91	5.87	7.95	0.52	1.04	Hexokinase
	mg/dl	125	106	144	9.50	19.00	

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Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Glucose	mmol/l	6.95	5.91	7.99	0.52	1.04	Glucose oxidase
	mg/dl	125	106	144	9.50	19.00	
HDL - Cholesterol	mmol/l	1.86	1.58	2.14	0.14	0.28	HDL - Ultra
	mg/dl	71.8	61.0	82.6	5.40	10.80	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric with ppt.
	µg/dl	104	85.0	123	9.50	19.00	
	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
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	223	189	257	17.00	34.00	L->P 37°C
	U/l	222	189	255	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.612	0.776	0.04	0.08	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Arsenazo III
	mg/dl	2.19	1.92	2.46	0.14	0.27	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Enzymatic
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.00	3.41	4.59	0.30	0.59	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.03	3.44	4.62	0.30	0.59	
Potassium	mmol/l	3.88	3.57	4.19	0.16	0.31	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	

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Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction kinetic
	g/dl	6.11	4.89	7.33	0.61	1.22	
PSA Total	ng/ml =	15.5	11.6	19.4	1.95	3.90	Abbott Architect
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.04	0.84	1.25	0.10	0.21	Abbott Architect
TIBC	µmol/l	45.2	35.7	54.7	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	253	200	306	26.50	53.00	
Total T3	nmol/l	2.54	1.91	3.17	0.32	0.63	Abbott Architect
	ng/ml	1.65	1.24	2.06	0.21	0.41	
	ng/dl	165	124	206	20.50	41.00	Abbott Architect
Total T4	nmol/l	85.1	63.8	106	10.65	21.30	Abbott Architect
	µg/dl	6.64	4.98	8.30	0.83	1.66	
	ng/ml	66.4	49.8	83.0	8.30	16.60	Abbott Architect
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.05	0.89	1.21	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	92.9	78.4	107	7.25	14.50	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.3	110	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	

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Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
	g/l	45.6	38.8	52.4	3.40	6.80	Bromocresol Purple
	g/dl	4.56	3.88	5.24	0.34	0.68	
Alkaline Phosphatase	U/l	294	250	338	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	142	120	164	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	209	178	240	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	85	73	97	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.3	10.5	16.1	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
Bilirubin Total	µmol/l	30.3	24.0	36.6	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	32.5	25.7	39.3	3.40	6.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	32.0	25.3	38.7	3.35	6.70	Oxidation to Biliverdin
	mg/dl	1.87	1.48	2.26	0.20	0.39	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.90	7.98	9.82	0.46	0.92	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Arsenazo III
	mg/dl	9.06	8.18	9.94	0.44	0.88	
Cholesterol	mmol/l	5.14	4.47	5.81	0.34	0.67	Cholesterol Oxidase
	mg/dl	198	173	223	12.50	25.00	
Chloride	mmol/l	95.5	87.8	103	3.85	7.70	ISE indirect
Cholinesterase	U/l	5504	4403	6605	550.50	1101.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	220	181	259	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	214	175	253	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	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	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	
	µmol/l	117	93.7	140	11.65	23.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	118	94.0	142	12.00	24.00	IDMS traceable
	mg/dl	1.33	1.06	1.60	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	21	16	26	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	7.11	6.04	8.18	0.54	1.07	Hexokinase
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Glucose oxidase
	mg/dl	129	109	149	10.00	20.00	
HDL - Cholesterol	mmol/l	1.79	1.53	2.05	0.13	0.26	Direct HDL Immunoseparation
	mg/dl	69.1	59.1	79.1	5.00	10.00	
	mmol/l	1.78	1.51	2.05	0.14	0.27	Direct Clearance Method
	mg/dl	68.7	58.3	79.1	5.20	10.40	
	mmol/l	1.72	1.46	1.98	0.13	0.26	Direct HDL Roche 3rd generation
	mg/dl	66.4	56.4	76.4	5.00	10.00	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	85.0	121	9.00	18.00	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.52	1.24	1.80	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	
LD (LDH)	U/l	495	421	569	37.00	74.00	P->L Scandinavian & Dutch 37°C
	U/l	455	386	524	34.50	69.00	P->L German methods 37°C
	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	28	22	34	3.00	6.00	Other Colorimetric 37°C
	U/l	32	25	39	3.50	7.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.95	0.84	1.06	0.06	0.11	Spectrophotometric
	mg/dl	0.660	0.581	0.739	0.04	0.08	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.01	2.55	0.14	0.27	
Osmolality	mOsm/kg	284	228	340	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.3	37.4	57.2	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	264	209	319	27.50	55.00	
Total T4	nmol/l	89.8	67.3	112	11.25	22.50	Microgenics DRI assay
	µg/dl	7.00	5.25	8.75	0.88	1.75	
	ng/ml	70.0	52.5	87.5	8.75	17.50	Microgenics DRI assay
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	80.8	112	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	

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Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Purple
	g/dl	4.30	3.65	4.95	0.33	0.65	
Alkaline Phosphatase	U/l	192	164	220	14.00	28.00	p-Nitrophenylphosphate AMP 37°C
	U/l	196	167	225	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	59	50	68	4.50	9.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	92	79	105	6.50	13.00	Beckman maltotetraose 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Differential rate pH change
	mmol/l	13.1	10.4	15.8	1.35	2.70	Ion selective electrode
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	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Ion selective electrode
	mg/dl	8.82	7.94	9.70	0.44	0.88	

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Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Arsenazo III
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Cholesterol	mmol/l	4.82	4.20	5.44	0.31	0.62	Cholesterol Oxidase
	mg/dl	186	162	210	12.00	24.00	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	5828	4663	6993	582.50	1165.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
Creatinine	µmol/l	122	98.0	146	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	124	99.1	149	12.45	24.90	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	120	96.4	144	11.80	23.60	IDMS traceable
	mg/dl	1.36	1.09	1.63	0.14	0.27	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	42	36	48	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.91	5.88	7.94	0.52	1.03	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	6.87	5.84	7.90	0.52	1.03	Oxygen electrode
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	6.86	5.83	7.89	0.52	1.03	Glucose oxidase
	mg/dl	124	105	143	9.50	19.00	
HDL - Cholesterol	mmol/l	2.16	1.84	2.48	0.16	0.32	Direct HDL PPD
	mg/dl	83.4	71.0	95.8	6.20	12.40	

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.08	1.77	2.39	0.16	0.31	Direct HDL PEGME
	mg/dl	80.3	68.3	92.3	6.00	12.00	
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	1.58	1.29	1.87	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.6	16.8	1.30	2.60	
LD (LDH)	U/l	185	158	212	13.50	27.00	L->P 37°C
	U/l	592	503	681	44.50	89.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	220	187	253	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	28	22	34	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	0.96	0.84	1.07	0.06	0.12	Spectrophotometric
	mg/dl	0.665	0.585	0.745	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Calmagite
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Osmolality	mOsm/kg	282	226	338	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.03	3.44	4.62	0.30	0.59	
	mmol/l	1.32	1.13	1.51	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.09	3.50	4.68	0.30	0.59	
Potassium	mmol/l	3.91	3.59	4.23	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.6	47.6	71.6	6.00	12.00	Biuret reaction CX4/5/7
	g/dl	5.96	4.76	7.16	0.60	1.20	
	g/l	59.9	48.0	71.8	5.95	11.90	Biuret reaction end point
	g/dl	5.99	4.80	7.18	0.60	1.19	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	

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Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.9	38.6	59.2	5.15	10.30	Removal of excess free iron
	µg/dl	273	216	330	28.50	57.00	
	µmol/l	49.8	39.4	60.2	5.20	10.40	FE+UIBC(saturation with iron)
	µg/dl	278	220	336	29.00	58.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.8	116	8.10	16.20	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.9	114	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.43	4.72	6.14	0.36	0.71	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease end point
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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BIOSYSTEMS A15

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Albumin	g/l	37.5	31.8	43.2	2.85	5.70	Bromocresol Green
	g/dl	3.75	3.18	4.32	0.29	0.57	
Alkaline Phosphatase	U/l	182	154	210	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	142	120	164	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	22	30	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
Cholesterol	mmol/l	5.24	4.56	5.92	0.34	0.68	Cholesterol Oxidase
	mg/dl	202	176	228	13.00	26.00	
Creatinine	µmol/l	118	94.5	142	11.75	23.50	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	7.17	6.09	8.25	0.54	1.08	Glucose oxidase
	mg/dl	129	110	148	9.50	19.00	
Triglycerides	mmol/l	1.16	0.98	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.3	120	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.43	5.59	7.27	0.42	0.84	

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BIOSYSTEMS A15

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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 no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
Urea	mmol/l	6.98	5.93	8.03	0.53	1.05	Urease kinetic
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.98	5.93	8.03	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	38.7	32.9	44.5	2.90	5.80	Bromocresol Green
	g/dl	3.87	3.29	4.45	0.29	0.58	
Alkaline Phosphatase	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	133	114	152	9.50	19.00	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	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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	36.3	28.7	43.9	3.80	7.60	Diazo with Sulphanilic Acid
	mg/dl	2.12	1.68	2.56	0.22	0.44	
Cholesterol	mmol/l	5.15	4.48	5.82	0.34	0.67	Cholesterol Oxidase
	mg/dl	199	173	225	13.00	26.00	
Creatinine	µmol/l	117	93.6	140	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
Glucose	mmol/l	7.12	6.05	8.19	0.54	1.07	Glucose oxidase
	mg/dl	128	109	147	9.50	19.00	
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.15	5.34	6.96	0.41	0.81	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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COBAS INTEGRA®

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Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.9	36.4	49.4	3.25	6.50	Bromocresol Green
	g/dl	4.29	3.64	4.94	0.33	0.65	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche liquid pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox liquid pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Enzymatic
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	

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Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazonium ion
	mg/dl	1.64	1.29	1.99	0.18	0.35	
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	2.25	2.02	2.48	0.12	0.23	NM-BAPTA
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	5.17	4.49	5.85	0.34	0.68	Cholesterol Oxidase
	mg/dl	200	173	227	13.50	27.00	
Chloride	mmol/l	95.7	88.1	103	3.80	7.60	ISE indirect
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	136	111	161	12.50	25.00	CK-NAC substrate start (DGKC) 30°C
	U/l	92	76	108	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	136	111	161	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	92	76	108	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	117	93.9	140	11.55	23.10	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	121	96.4	146	12.30	24.60	Roche Creatinine Plus
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	120	96.3	144	11.85	23.70	Jaffe rate blanked
	mg/dl	1.36	1.09	1.63	0.14	0.27	

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Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	117	93.3	141	11.85	23.70	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.32	1.05	1.59	0.14	0.27	
	µmol/l	119	95.5	143	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	
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	6.89	5.85	7.93	0.52	1.04	Glucose dehydrogenase
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	7.08	6.02	8.14	0.53	1.06	Hexokinase
	mg/dl	128	108	148	10.00	20.00	
	mmol/l	7.26	6.17	8.35	0.55	1.09	Glucose oxidase
	mg/dl	131	111	151	10.00	20.00	
HDL - Cholesterol	mmol/l	1.86	1.58	2.14	0.14	0.28	Direct HDL Roche 3rd generation
	mg/dl	71.8	61.0	82.6	5.40	10.80	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	
	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
LD (LDH)	U/l	438	372	504	33.00	66.00	P->L German methods 37°C
	U/l	316	269	363	23.50	47.00	P->L German methods 30°C
	U/l	222	189	255	16.50	33.00	P->L German methods 25°C

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	234	199	269	17.50	35.00	L->P IFCC 37°C
	U/l	169	144	194	12.50	25.00	L->P IFCC 30°C
	U/l	119	101	137	9.00	18.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.90	1.16	0.06	0.13	Ion selective electrode
	mg/dl	0.715	0.628	0.802	0.04	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.37	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	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction kinetic
	g/dl	5.71	4.57	6.85	0.57	1.14	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.8	36.2	55.4	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	256	202	310	27.00	54.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.8	109	7.50	15.00	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
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	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.94	6.38	0.36	0.72	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease end point
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	6.82	5.80	7.84	0.51	1.02	Urease kinetic
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.82	5.80	7.84	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	

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ELITech/Vitalab Selectra Pro/E/XL

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	273	232	314	20.50	41.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	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	27.5	21.7	33.3	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Cholesterol	mmol/l	5.16	4.49	5.83	0.34	0.67	Cholesterol Oxidase
	mg/dl	199	173	225	13.00	26.00	
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.28	6.19	8.37	0.55	1.09	Glucose oxidase
	mg/dl	131	112	150	9.50	19.00	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	230	195	265	17.50	35.00	L->P IFCC 37°C
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	
Protein Total	g/l	63.2	50.6	75.8	6.30	12.60	Biuret reaction end point
	g/dl	6.32	5.06	7.58	0.63	1.26	
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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	7.16	6.08	8.24	0.54	1.08	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.16	6.09	8.23	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Purple
	g/dl	4.13	3.51	4.75	0.31	0.62	
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
	U/l	184	157	211	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	185	157	213	14.00	28.00	Randox AMP 37°C
	U/l	144	122	166	11.00	22.00	Randox AMP 30°C
	U/l	118	100	136	9.00	18.00	Randox AMP 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Randox liquid pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	7.71	5.17	10.3	1.27	2.54	1-Naphthyl Phosphate substrate Kinetic 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (non-prostatic)	U/l	5.40	3.62	7.18	0.89	1.78	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	16.1	10.8	21.4	2.65	5.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	8.59	5.76	11.4	1.42	2.83	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	21.5	14.4	28.6	3.55	7.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	16.3	10.9	21.7	2.70	5.40	1-Naphthyl Phosphate substrate Kinetic 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	27.1	21.7	32.5	2.70	5.40	5th Generation Colorimetric
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Colorimetric
	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	18.9	15.0	22.8	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	28.2	22.2	34.2	3.00	6.00	Diazonium ion
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	

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Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.25	2.02	2.48	0.12	0.23	NM-BAPTA
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	5.06	4.40	5.72	0.33	0.66	Cholesterol Oxidase
	mg/dl	195	170	220	12.50	25.00	
Chloride	mmol/l	92.6	85.2	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5518	4414	6622	552.00	1104.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	197	162	232	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	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	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.24	0.20	0.27	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	55	47	63	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
GLDH	U/l	25	20	30	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.97	5.93	8.01	0.52	1.04	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	7.23	6.15	8.31	0.54	1.08	Glucose oxidase
	mg/dl	130	111	149	9.50	19.00	
alpha-HBDH	U/l	272	215	329	28.50	57.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	205	162	248	21.50	43.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	154	122	186	16.00	32.00	Oxobutyrate < 10 mmol/l 25°C

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Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.85	1.58	2.12	0.14	0.27	Direct HDL Immunoseparation
	mg/dl	71.4	61.0	81.8	5.20	10.40	
	mmol/l	1.92	1.63	2.21	0.15	0.29	Direct HDL PEGME
	mg/dl	74.1	62.9	85.3	5.60	11.20	
	mmol/l	1.86	1.58	2.14	0.14	0.28	Direct HDL Roche 3rd generation
	mg/dl	71.8	61.0	82.6	5.40	10.80	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	448	381	515	33.50	67.00	P->L German methods 37°C
	U/l	323	275	371	24.00	48.00	P->L German methods 30°C
	U/l	227	193	261	17.00	34.00	P->L German methods 25°C
	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C
	U/l	158	134	182	12.00	24.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Enzymatic
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	

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Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.97	3.66	4.28	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.1	34.8	53.4	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	247	195	299	26.00	52.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.7	106	7.25	14.50	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	132	112	152	10.00	20.00	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
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.4	20.3	30.5	2.55	5.10	Enzymatic Colorimetric
Bilirubin Total	µmol/l	32.3	25.5	39.1	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.89	1.49	2.29	0.20	0.40	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	5.00	4.35	5.65	0.33	0.65	Cholesterol Oxidase
	mg/dl	193	168	218	12.50	25.00	
Chloride	mmol/l	94.0	86.5	102	3.75	7.50	ISE indirect
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC (IFCC) 25°C

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	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
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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	7.17	6.10	8.24	0.54	1.07	Hexokinase
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	7.01	5.96	8.06	0.53	1.05	Glucose oxidase
	mg/dl	126	107	145	9.50	19.00	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
LD (LDH)	U/l	437	372	502	32.50	65.00	P->L German methods 37°C
	U/l	316	269	363	23.50	47.00	P->L German methods 30°C
	U/l	222	189	255	16.50	33.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
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	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
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	
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	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

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Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

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Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	149	127	171	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	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	52	42	62	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Ortho Vitros Microslide Systems
Bilirubin Direct	µmol/l	11.9	9.40	14.4	1.25	2.50	Vitros conjugated from BUBC
	mg/dl	0.696	0.550	0.842	0.07	0.15	
Bilirubin Total	µmol/l	26.6	21.1	32.1	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.27	2.05	2.49	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	9.10	8.22	9.98	0.44	0.88	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.81	4.19	5.43	0.31	0.62	Ortho Vitros Microslide Systems
	mg/dl	186	162	210	12.00	24.00	
	mmol/l	5.03	4.38	5.68	0.33	0.65	Vitros DT60/DT60 II
	mg/dl	194	169	219	12.50	25.00	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	98.0	90.2	106	3.90	7.80	Vitros DT60/DT60 II/DTE II
Cholinesterase	U/l	5399	4319	6479	540.00	1080.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Free T4	pmol/l	36.6	27.4	45.8	4.60	9.20	Vitros ECi
	ng/dl	2.85	2.14	3.56	0.36	0.71	
	pg/ml	28.5	21.4	35.6	3.55	7.10	Vitros ECi
gamma-GT	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.72	5.71	7.73	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	121	103	139	9.00	18.00	
HDL - Cholesterol	mmol/l	1.83	1.56	2.10	0.14	0.27	Vitros Magnetic HDL
	mg/dl	70.6	60.2	81.0	5.20	10.40	
	mmol/l	1.80	1.53	2.07	0.14	0.27	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	69.5	59.1	79.9	5.20	10.40	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	
LD (LDH)	U/l	650	553	747	48.50	97.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	198	159	237	19.50	39.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.14	1.00	1.28	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.792	0.694	0.890	0.05	0.10	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	3.97	3.65	4.29	0.16	0.32	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	139	133	145	3.00	6.00	Ortho Vitros Microslide Systems
	mmol/l	139	132	146	3.50	7.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.31	1.05	1.57	0.13	0.26	Vitros ECi
TIBC	µmol/l	47.5	37.6	57.4	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	87.5	121	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.43	4.72	6.14	0.36	0.71	
Urea	mmol/l	6.61	5.62	7.60	0.50	0.99	Ortho Vitros Microslide Systems
	mg/dl	39.7	33.8	45.6	2.95	5.90	
	mmol/l	6.61	5.62	7.60	0.50	0.99	BUN
	mg/dl	18.6	15.8	21.4	1.40	2.80	

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			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	285	242	328	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	222	189	255	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	182	155	209	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	182	154	210	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	142	120	164	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	183	156	210	13.50	27.00	AMP optimised to NVKC/SFBC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
	U/l	117	100	134	8.50	17.00	AMP optimised to NVKC/SFBC 25°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	100	85	115	7.50	15.00	Randox - Ethylidene pNPG7 37°C
	U/l	83	70	96	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	27.1	21.7	32.5	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.4	15.4	23.4	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.901	1.36	0.11	0.23	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	27.1	21.4	32.8	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.92	4.28	5.56	0.32	0.64	Cholesterol Oxidase
	mg/dl	190	165	215	12.50	25.00	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	ISE direct
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	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	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	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	124	99.2	149	12.40	24.80	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.28	6.19	8.37	0.55	1.09	Hexokinase
	mg/dl	131	112	150	9.50	19.00	
	mmol/l	7.07	6.01	8.13	0.53	1.06	Glucose oxidase
	mg/dl	127	108	146	9.50	19.00	
HDL - Cholesterol	mmol/l	1.80	1.53	2.07	0.14	0.27	Direct HDL PEGME
	mg/dl	69.5	59.1	79.9	5.20	10.40	
Iron	µmol/l	22.0	18.0	26.0	2.00	4.00	Colorimetric without ppt.
	µg/dl	123	101	145	11.00	22.00	
LD (LDH)	U/l	472	401	543	35.50	71.00	P->L Scandinavian & Dutch 37°C
	U/l	341	290	392	25.50	51.00	P->L Scandinavian & Dutch 30°C
	U/l	239	203	275	18.00	36.00	P->L Scandinavian & Dutch 25°C
	U/l	469	398	540	35.50	71.00	P->L German methods 37°C
	U/l	339	287	391	26.00	52.00	P->L German methods 30°C
	U/l	238	202	274	18.00	36.00	P->L German methods 25°C
Magnesium	mmol/l	0.99	0.87	1.11	0.06	0.12	Calmagite
	mg/dl	2.41	2.12	2.70	0.15	0.29	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.01	2.57	0.14	0.28	
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	3.87	3.56	4.18	0.16	0.31	ISE method - direct
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	136	129	143	3.50	7.00	ISE method - direct

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	
Urea	mmol/l	7.17	6.09	8.25	0.54	1.08	Urease kinetic
	mg/dl	43.1	36.6	49.6	3.25	6.50	
	mmol/l	7.17	6.09	8.25	0.54	1.08	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	40.2	34.2	46.2	3.00	6.00	Turbidimetric Assays
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	192	164	220	14.00	28.00	p-Nitrophenylphosphate AMP 37°C
	U/l	150	128	172	11.00	22.00	p-Nitrophenylphosphate AMP 30°C
	U/l	123	105	141	9.00	18.00	p-Nitrophenylphosphate AMP 25°C
	U/l	149	127	171	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	281	239	323	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	180	153	207	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	191	162	220	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	149	126	172	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to NVKC/SFBC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
	U/l	116	99	133	8.50	17.00	AMP optimised to NVKC/SFBC 25°C

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Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	34	52	4.50	9.00	Tris buffer with P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer with P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
	U/l	37	29	45	4.00	8.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
	U/l	21	16	26	2.50	5.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	64	54	74	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox liquid pNPG7 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	I.L. - blocked pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox - Ethylidene pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Randox liquid stable pNPG7 37°C
	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Beckman maltotetraose 37°C
	U/l	89	76	102	6.50	13.00	Siemens - maltopenta/hexaoside 37°C
	U/l	88	74	102	7.00	14.00	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

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	91	78	104	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
	U/l	86	73	99	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	88	74	102	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	1.00	0.82	1.18	0.09	0.18	Immunoturbidimetric
	mg/dl	99.6	81.7	118	8.95	17.90	
Apolipoprotein B	g/l	0.61	0.50	0.72	0.05	0.11	Immunoturbidimetric
	mg/dl	60.7	49.8	71.6	5.45	10.90	
Acid Phosphatase (non-prostatic)	U/l	7.71	5.17	10.3	1.27	2.54	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	5.40	3.62	7.18	0.89	1.78	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.59	5.76	11.4	1.42	2.83	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	16.1	10.8	21.4	2.65	5.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	16.3	10.9	21.7	2.70	5.40	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	21.5	14.4	28.6	3.55	7.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer with P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P 25°C
	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
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer SCE 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	27.7	22.2	33.2	2.75	5.50	4th Generation Colorimetric

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	26.8	21.4	32.2	2.70	5.40	5th Generation Colorimetric
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Colorimetric
	mmol/l	13.9	11.0	16.8	1.45	2.90	Ortho Vitros Microslide Systems
	mmol/l	12.9	10.2	15.6	1.35	2.70	Differential rate pH change
	mmol/l	13.2	10.5	15.9	1.35	2.70	Enzymatic
	mmol/l	13.1	10.4	15.8	1.35	2.70	Ion selective electrode
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.20	0.948	1.45	0.13	0.25	
	µmol/l	11.9	9.40	14.4	1.25	2.50	Vitros conjugated from BUBC
	mg/dl	0.696	0.550	0.842	0.07	0.15	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	20.3	16.1	24.5	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Oxidation to Biliverdin
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Modified Jendrassik
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	26.6	21.1	32.1	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	38.5	30.4	46.6	4.05	8.10	Diazo with Dichloroaniline (DCA)
	mg/dl	2.25	1.78	2.72	0.24	0.47	
	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	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	31.6	25.0	38.2	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.8	21.9	33.7	2.95	5.90	Diazonium ion
	mg/dl	1.63	1.28	1.98	0.18	0.35	
	µmol/l	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin
	mg/dl	1.87	1.47	2.27	0.20	0.40	
	µmol/l	37.7	29.8	45.6	3.95	7.90	Modified Jendrassik
	mg/dl	2.21	1.74	2.68	0.24	0.47	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.27	2.05	2.49	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	9.10	8.22	9.98	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Ion selective electrode
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.38	2.14	2.62	0.12	0.24	Methylthymol blue
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.81	4.19	5.43	0.31	0.62	Ortho Vitros Microslide Systems
	mg/dl	186	162	210	12.00	24.00	
	mmol/l	5.05	4.40	5.70	0.33	0.65	Cholesterol Oxidase
	mg/dl	195	170	220	12.50	25.00	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	Colorimetric
	mmol/l	96.4	88.7	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
	mmol/l	97.2	89.4	105	3.90	7.80	ISE direct
Cholinesterase	U/l	5541	4433	6649	554.00	1108.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	208	170	246	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	210	172	248	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
	U/l	131	108	154	11.50	23.00	Monothioglycerol 30°C
	U/l	89	73	105	8.00	16.00	Monothioglycerol 25°C
	U/l	201	165	237	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	126	103	149	11.50	23.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	85	70	100	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	197	162	232	17.50	35.00	Dithioerythritol 37°C
	U/l	123	101	145	11.00	22.00	Dithioerythritol 30°C
	U/l	84	69	99	7.50	15.00	Dithioerythritol 25°C
Copper	µmol/l	18.5	14.8	22.2	1.85	3.70	Atomic absorption
	µg/dl	118	94.1	142	11.95	23.90	
	µmol/l	18.7	15.0	22.4	1.85	3.70	Colorimetric
	µg/dl	119	95.4	143	11.80	23.60	
Cortisol	nmol/l	478	359	597	59.50	119.00	Roche Cobas 4000/E411
	µg/dl	17.2	12.9	21.5	2.15	4.30	
Creatinine	µmol/l	121	96.4	146	12.30	24.60	Alkaline picrate with deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	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	
	µmol/l	126	101	151	12.50	25.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	134	107	161	13.50	27.00	Randox Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	120	96.1	144	11.95	23.90	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	128	102	154	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	121	96.7	145	12.15	24.30	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.23	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.07	1.66	2.48	0.21	0.41	Immunoturbidimetric
	ng/ml	1.62	1.30	1.94	0.16	0.32	
Folate	nmol/l	43.1	32.8	53.4	5.15	10.30	Roche Cobas 4000/E411
	ng/ml	19.0	14.5	23.5	2.25	4.50	
Free T4	pmol/l	19.1	14.3	23.9	2.40	4.80	Abbott Architect
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Abbott Architect
	pmol/l	18.8	14.1	23.5	2.35	4.70	Siemens Centaur XP/Classic
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Siemens Centaur XP/Classic
	pmol/l	19.1	14.3	23.9	2.40	4.80	Beckman Access
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Beckman Access
	pmol/l	21.2	15.9	26.5	2.65	5.30	BioMerieux Vidas
	ng/dl	1.65	1.24	2.06	0.21	0.41	
	pg/ml	16.5	12.4	20.6	2.05	4.10	BioMerieux Vidas
	pmol/l	13.4	10.1	16.7	1.65	3.30	BioMerieux Vidas
	ng/dl	1.05	0.788	1.31	0.13	0.26	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	36.6	27.4	45.8	4.60	9.20	Vitros ECi
	ng/dl	2.85	2.14	3.56	0.36	0.71	
	pg/ml	28.5	21.4	35.6	3.55	7.10	Vitros ECi
	pmol/l	22.7	17.0	28.4	2.85	5.70	Roche Elecsys
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Elecsys
	pmol/l	22.0	16.5	27.5	2.75	5.50	Roche Modular E170
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Modular E170
	pmol/l	22.7	17.0	28.4	2.85	5.70	Roche Cobas E411
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Cobas E411
	pmol/l	22.6	16.9	28.3	2.85	5.70	Roche Cobas 6000/8000
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Cobas 6000/8000
Gentamicin	µmol/l	8.33	6.66	10.0	0.84	1.67	Immunoturbidimetric
	µg/ml	3.98	3.18	4.78	0.40	0.80	
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	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	55	47	63	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	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	6.72	5.71	7.73	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	6.93	5.89	7.97	0.52	1.04	Glucose dehydrogenase
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	7.02	5.97	8.07	0.53	1.05	Hexokinase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	6.88	5.85	7.91	0.52	1.03	Oxygen electrode
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	7.08	6.02	8.14	0.53	1.06	Glucose oxidase
	mg/dl	128	108	148	10.00	20.00	
alpha-HBDH	U/l	272	215	329	28.50	57.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	205	162	248	21.50	43.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	154	122	186	16.00	32.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.04	1.73	2.35	0.16	0.31	Direct HDL PPD
	mg/dl	78.7	66.8	90.6	5.95	11.90	
	mmol/l	1.77	1.50	2.04	0.14	0.27	Direct HDL Immunoseparation
	mg/dl	68.3	57.9	78.7	5.20	10.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.83	1.56	2.10	0.14	0.27	Vitros Magnetic HDL
	mg/dl	70.6	60.2	81.0	5.20	10.40	
	mmol/l	1.84	1.56	2.12	0.14	0.28	Direct HDL PEGME
	mg/dl	71.0	60.2	81.8	5.40	10.80	
	mmol/l	1.80	1.53	2.07	0.14	0.27	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	69.5	59.1	79.9	5.20	10.40	
	mmol/l	1.82	1.55	2.09	0.14	0.27	Direct HDL Roche 3rd generation
	mg/dl	70.3	59.8	80.8	5.25	10.50	
	mmol/l	1.86	1.58	2.14	0.14	0.28	HDL - Ultra
	mg/dl	71.8	61.0	82.6	5.40	10.80	
Immunoglobulin A	g/l	1.91	1.43	2.39	0.24	0.48	Immunoturbidimetric
	mg/dl	191	143	239	24.00	48.00	
Immunoglobulin G	g/l	6.30	5.17	7.43	0.57	1.13	Immunoturbidimetric
	mg/dl	630	517	743	56.50	113.00	
Immunoglobulin M	g/l	0.73	0.58	0.87	0.07	0.15	Immunoturbidimetric
	mg/dl	72.6	58.1	87.1	7.25	14.50	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric with ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	UV LDH
	mg/dl	13.0	10.6	15.4	1.20	2.40	
LAP	U/l	17	14	20	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	200	170	230	15.00	30.00	L->P 37°C
	U/l	144	123	165	10.50	21.00	L->P 30°C
	U/l	101	86	116	7.50	15.00	L->P 25°C
	U/l	486	413	559	36.50	73.00	P->L Scandinavian & Dutch 37°C
	U/l	351	298	404	26.50	53.00	P->L Scandinavian & Dutch 30°C
	U/l	246	209	283	18.50	37.00	P->L Scandinavian & Dutch 25°C
	U/l	444	377	511	33.50	67.00	P->L German methods 37°C
	U/l	321	272	370	24.50	49.00	P->L German methods 30°C
	U/l	225	191	259	17.00	34.00	P->L German methods 25°C
	U/l	441	375	507	33.00	66.00	P->L SFBC 37°C
	U/l	318	271	365	23.50	47.00	P->L SFBC 30°C
	U/l	224	190	258	17.00	34.00	P->L SFBC 25°C
	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
	U/l	161	137	185	12.00	24.00	L->P IFCC 30°C
	U/l	113	96	130	8.50	17.00	L->P IFCC 25°C
	U/l	243	207	279	18.00	36.00	L->P Randox 37°C
	U/l	175	149	201	13.00	26.00	L->P Randox 30°C
	U/l	123	105	141	9.00	18.00	L->P Randox 25°C
Lipase	U/l	198	159	237	19.50	39.00	Ortho Vitros Microslide Systems 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C

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Cat. No. HN1530 / HS2611 Lot No. 890UN

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			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	176	141	211	17.50	35.00	Randox Turbidimetric with colipase 37°C
	U/l	38	30	46	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Atomic absorption
	mg/dl	0.701	0.617	0.785	0.04	0.08	
	mmol/l	1.14	1.00	1.28	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.792	0.694	0.890	0.05	0.10	
	mmol/l	1.01	0.89	1.13	0.06	0.12	Flame photometry
	mg/dl	0.701	0.619	0.783	0.04	0.08	
	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.617	0.785	0.04	0.08	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.612	0.776	0.04	0.08	
	mmol/l	0.97	0.85	1.09	0.06	0.12	Randox Colorimetric
	mg/dl	0.674	0.593	0.755	0.04	0.08	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Arsenazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Calmagite
	mg/dl	2.28	2.00	2.56	0.14	0.28	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.18	1.91	2.45	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Enzymatic
	mg/dl	2.17	1.91	2.43	0.13	0.26	
NEFA	mmol/l	1.53	1.30	1.76	0.12	0.23	Colorimetric
Osmolality	mOsm/kg	282	225	339	28.50	57.00	Calculated
	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
	mOsm/kg	299	239	359	30.00	60.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.10	0.01	0.02	Colorimetric
	mg/l	12.2	9.68	14.7	1.26	2.52	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	3.94	3.62	4.26	0.16	0.32	Enzymatic
	mmol/l	4.00	3.68	4.32	0.16	0.32	Flame photometry
	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct
	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.95	4.76	7.14	0.60	1.19	
	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction kinetic
	g/dl	5.81	4.65	6.97	0.58	1.16	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	17.7	13.2	22.2	2.25	4.50	Roche Elecsys Modular E170
	ng/ml =	17.2	12.9	21.5	2.15	4.30	bioMerieux VIDAS TPSA
	ng/ml =	14.0	10.5	17.5	1.75	3.50	Siemens Centaur XP/Classic
	ng/ml =	15.3	11.5	19.1	1.90	3.80	Abbott Architect
	ng/ml =	18.4	13.8	23.0	2.30	4.60	Cobas E411
	ng/ml =	18.2	13.6	22.8	2.30	4.60	Roche Cobas 6000/8000
Salicylate	mmol/l	0.41	0.33	0.50	0.04	0.08	Enzymatic
	mg/dl	5.72	4.58	6.86	0.57	1.14	
Sodium	mmol/l	139	133	145	3.00	6.00	Ortho Vitros Microslide Systems
	mmol/l	140	133	147	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	Flame photometry
	mmol/l	138	131	145	3.50	7.00	ISE method - direct
	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	31.3	25.0	37.6	3.15	6.30	Immunoturbidimetric
	µg/ml	5.64	4.51	6.77	0.57	1.13	
Thyroid Stimulating Hormone	µU/ml =	1.02	0.82	1.22	0.10	0.20	Abbott Architect
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Siemens Centaur XP/Classic 3rd Generation
	µU/ml =	1.57	1.25	1.89	0.16	0.32	bioMerieux VIDAS TSH
	µU/ml =	1.34	1.07	1.61	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Siemens Immulite 2000/2500
	µU/ml =	1.31	1.05	1.57	0.13	0.26	Vitros ECi
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Elecsys
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Modular E170
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.53	1.22	1.84	0.16	0.31	Roche Cobas 6000/8000
TIBC	µmol/l	47.5	37.6	57.4	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	45.8	36.2	55.4	4.80	9.60	Removal of excess free iron
	µg/dl	256	202	310	27.00	54.00	
	µmol/l	45.6	36.0	55.2	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	255	201	309	27.00	54.00	
	µmol/l	45.6	36.0	55.2	4.80	9.60	Direct Colorimetric
	µg/dl	255	201	309	27.00	54.00	
	µmol/l	50.2	39.7	60.7	5.25	10.50	Randox Direct
	µg/dl	281	222	340	29.50	59.00	
Tobramycin	µmol/l	5.13	4.10	6.16	0.52	1.03	Immunoturbidimetric
	µg/ml	2.40	1.92	2.88	0.24	0.48	
Total T3	nmol/l	2.53	1.89	3.17	0.32	0.64	Abbott Architect
	ng/ml	1.65	1.23	2.07	0.21	0.42	
	ng/dl	165	123	207	21.00	42.00	Abbott Architect
	nmol/l	3.10	2.32	3.88	0.39	0.78	Siemens Centaur XP/Classic
	ng/ml	2.02	1.51	2.53	0.26	0.51	
	ng/dl	202	151	253	25.50	51.00	Siemens Centaur XP/Classic
	nmol/l	2.70	2.02	3.38	0.34	0.68	BioMerieux Vidas
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	BioMerieux Vidas
	nmol/l	2.93	2.20	3.66	0.37	0.73	Roche Cobas E411
	ng/ml	1.91	1.43	2.39	0.24	0.48	
	ng/dl	191	143	239	24.00	48.00	Roche Cobas E411

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Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	86.4	64.8	108	10.80	21.60	Abbott Architect
	µg/dl	6.74	5.05	8.43	0.85	1.69	
	ng/ml	67.4	50.5	84.3	8.45	16.90	Abbott Architect
	nmol/l	82.9	62.2	104	10.35	20.70	BioMerieux Vidas
	µg/dl	6.47	4.85	8.09	0.81	1.62	
	ng/ml	64.7	48.5	80.9	8.10	16.20	BioMerieux Vidas
	nmol/l	82.7	62.0	103	10.35	20.70	Roche Modular E170
	µg/dl	6.45	4.84	8.06	0.81	1.61	
	ng/ml	64.5	48.4	80.6	8.05	16.10	Roche Modular E170
	nmol/l	85.8	64.4	107	10.70	21.40	Roche Cobas E411
	µg/dl	6.69	5.02	8.36	0.84	1.67	
	ng/ml	66.9	50.2	83.6	8.35	16.70	Roche Cobas E411
	nmol/l	81.6	61.2	102	10.20	20.40	Roche Cobas 6000/8000
	µg/dl	6.36	4.77	7.95	0.80	1.59	
	ng/ml	63.6	47.7	79.5	7.95	15.90	Roche Cobas 6000/8000
Transferrin	g/l	1.98	1.58	2.38	0.20	0.40	Immunoturbidimetric
	mg/dl	198	158	238	20.00	40.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.6	111	7.50	15.00	
	mmol/l	1.08	0.91	1.25	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.6	111	7.50	15.00	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.2	107	7.40	14.80	
	mmol/l	1.18	0.99	1.37	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	87.5	121	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.43	4.72	6.14	0.36	0.71	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	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	
Urea	mmol/l	6.61	5.62	7.60	0.50	0.99	Ortho Vitros Microslide Systems
	mg/dl	39.7	33.8	45.6	2.95	5.90	
	mmol/l	7.29	6.19	8.39	0.55	1.10	Urease end point
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.15	6.07	8.23	0.54	1.08	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease hypochlorite
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease Berthelot
	mg/dl	43.6	37.1	50.1	3.25	6.50	
Vitamin B12	pmol/l	536	429	643	53.50	107.00	Immunoturbidimetric
	pg/ml	726	581	871	72.50	145.00	
Zinc	µmol/l	24.6	19.6	29.6	2.50	5.00	Atomic absorption
	µg/dl	161	128	194	16.50	33.00	
	µmol/l	25.6	20.5	30.7	2.55	5.10	Colorimetric with deproteinisation
	µg/dl	167	134	200	16.50	33.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		6.9	5.2	8.6	0.83	1.66	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.4	4.9	7.9	0.77	1.54	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		65.3	58.8	71.8	3.25	6.50	% of total Protein (Beckman Capillary)
beta-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)
gamma-globulin		11.5	8.7	14.3	1.38	2.76	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	283	241	325	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	220	188	252	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	181	154	208	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.40	2.16	2.64	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.62	8.66	10.6	0.48	0.96	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	5.11	4.45	5.77	0.33	0.66	Cholesterol Oxidase
	mg/dl	197	172	222	12.50	25.00	
Chloride	mmol/l	105	96.2	114	4.40	8.80	ISE direct

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	123	98.5	148	12.25	24.50	Randox Enzymatic UV method
	mg/dl	1.39	1.11	1.67	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
Glucose	mmol/l	7.41	6.30	8.52	0.56	1.11	Glucose oxidase
	mg/dl	134	114	154	10.00	20.00	
HDL - Cholesterol	mmol/l	1.87	1.59	2.15	0.14	0.28	Direct HDL PPD
	mg/dl	72.2	61.4	83.0	5.40	10.80	
	mmol/l	1.82	1.55	2.09	0.14	0.27	Direct Clearance Method
	mg/dl	70.3	59.8	80.8	5.25	10.50	
LD (LDH)	U/l	468	398	538	35.00	70.00	P->L German methods 37°C
	U/l	338	287	389	25.50	51.00	P->L German methods 30°C
	U/l	237	202	272	17.50	35.00	P->L German methods 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
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.89	3.57	4.21	0.16	0.32	ISE method - direct
Protein Total	g/l	62.3	49.9	74.7	6.20	12.40	Biuret reaction end point
	g/dl	6.23	4.99	7.47	0.62	1.24	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.18	5.38	6.98	0.40	0.80	
	mmol/l	0.38	0.33	0.43	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.42	5.58	7.26	0.42	0.84	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Urea	mmol/l	7.54	6.41	8.67	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.17	6.09	8.25	0.54	1.08	Urease hypochlorite
	mg/dl	43.1	36.6	49.6	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	264	224	304	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	206	174	238	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	169	143	195	13.00	26.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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 Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Cholesterol	mmol/l	5.05	4.39	5.71	0.33	0.66	Cholesterol Oxidase
	mg/dl	195	169	221	13.00	26.00	
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	7.38	6.28	8.48	0.55	1.10	Glucose oxidase
	mg/dl	133	113	153	10.00	20.00	
HDL - Cholesterol	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Immunoseparation
	mg/dl	62.5	53.3	71.7	4.60	9.20	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
LD (LDH)	U/l	428	363	493	32.50	65.00	P->L German methods 37°C
	U/l	309	262	356	23.50	47.00	P->L German methods 30°C
	U/l	217	184	250	16.50	33.00	P->L German methods 25°C
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	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.33	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	
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.6	49.4	3.20	6.40	
	mmol/l	7.16	6.09	8.23	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Purple
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	112	96	128	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	92	79	105	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche 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	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	26.5	21.2	31.8	2.65	5.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Colorimetric

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	20.6	16.2	25.0	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.948	1.47	0.13	0.26	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazonium ion
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.98	8.06	9.90	0.46	0.92	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	5.07	4.41	5.73	0.33	0.66	Cholesterol Oxidase
	mg/dl	196	170	222	13.00	26.00	
Chloride	mmol/l	90.1	82.9	97.3	3.60	7.20	ISE indirect
Cholinesterase	U/l	5470	4376	6564	547.00	1094.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC substrate start (DGKC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC substrate start (DGKC) 25°C
	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	136	111	161	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	92	76	108	8.00	16.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	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	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	98.9	149	12.55	25.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	22.6	16.9	28.3	2.85	5.70	Roche Cobas 6000/8000
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Cobas 6000/8000
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	45	38	52	3.50	7.00	Agappe - Szasz Kinetic 37°C
	U/l	35	30	40	2.50	5.00	Agappe - Szasz Kinetic 30°C
	U/l	28	23	33	2.50	5.00	Agappe - Szasz Kinetic 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.97	5.92	8.02	0.53	1.05	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	6.90	5.87	7.93	0.52	1.03	Glucose oxidase
	mg/dl	124	106	142	9.00	18.00	
HDL - Cholesterol	mmol/l	1.87	1.59	2.15	0.14	0.28	Direct HDL PEGME
	mg/dl	72.2	61.4	83.0	5.40	10.80	
	mmol/l	1.81	1.54	2.08	0.14	0.27	Direct HDL Roche 3rd generation
	mg/dl	69.9	59.4	80.4	5.25	10.50	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.54	1.26	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	437	371	503	33.00	66.00	P->L German methods 37°C
	U/l	316	268	364	24.00	48.00	P->L German methods 30°C
	U/l	222	188	256	17.00	34.00	P->L German methods 25°C
	U/l	433	368	498	32.50	65.00	P->L SFBC 37°C
	U/l	313	266	360	23.50	47.00	P->L SFBC 30°C
	U/l	220	187	253	16.50	33.00	P->L SFBC 25°C
	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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.626	0.790	0.04	0.08	
Magnesium	mmol/l	0.93	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Osmolality	mOsm/kg	279	224	334	27.50	55.00	Calculated
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	
PSA Total	ng/ml =	18.2	13.7	22.7	2.25	4.50	Roche Cobas 6000/8000
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.53	1.22	1.84	0.16	0.31	Roche Cobas 6000/8000
TIBC	µmol/l	45.1	35.6	54.6	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	252	199	305	26.50	53.00	
	µmol/l	44.5	35.1	53.9	4.70	9.40	Direct Colorimetric
	µg/dl	249	196	302	26.50	53.00	
Total T3	nmol/l	2.71	2.03	3.39	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Roche Cobas 6000/8000

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	81.6	61.2	102	10.20	20.40	Roche Cobas 6000/8000
	µg/dl	6.36	4.77	7.95	0.80	1.59	
	ng/ml	63.6	47.7	79.5	7.95	15.90	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.6	111	7.50	15.00	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.1	114	8.05	16.10	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.5	111	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.49	4.77	6.21	0.36	0.72	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.48	4.75	6.21	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.56	4.84	6.28	0.36	0.72	
Urea	mmol/l	6.89	5.85	7.93	0.52	1.04	Urease end point
	mg/dl	41.4	35.2	47.6	3.10	6.20	
	mmol/l	6.99	5.94	8.04	0.53	1.05	Urease kinetic
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazonium ion
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	5.17	4.50	5.84	0.34	0.67	Cholesterol Oxidase
	mg/dl	200	174	226	13.00	26.00	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	110	160	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	116	92.7	139	11.65	23.30	Alkaline picrate no deproteinization
	mg/dl	1.31	1.05	1.57	0.13	0.26	
	µmol/l	120	96.3	144	11.85	23.70	Roche Creatinine Plus
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	115	91.7	138	11.65	23.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.11	6.04	8.18	0.54	1.07	Hexokinase
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	7.05	5.99	8.11	0.53	1.06	Glucose oxidase
	mg/dl	127	108	146	9.50	19.00	
HDL - Cholesterol	mmol/l	1.81	1.54	2.08	0.14	0.27	Direct HDL Roche 3rd generation
	mg/dl	69.9	59.4	80.4	5.25	10.50	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	232	197	267	17.50	35.00	L->P IFCC 37°C
	U/l	168	142	194	13.00	26.00	L->P IFCC 30°C
	U/l	118	100	136	9.00	18.00	L->P IFCC 25°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction end point
	g/dl	5.92	4.73	7.11	0.60	1.19	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.6	111	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.8	109	7.50	15.00	
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	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.41	4.70	6.12	0.36	0.71	
Urea	mmol/l	6.95	5.91	7.99	0.52	1.04	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease hypochlorite
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	6.95	5.91	7.99	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	142	120	164	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	93	129	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	113	96	130	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	93	79	107	7.00	14.00	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
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	20.2	15.9	24.5	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.20	0.948	1.45	0.13	0.25	
Bilirubin Total	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazonium ion
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.24	2.01	2.47	0.12	0.23	NM-BAPTA
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Cholesterol	mmol/l	5.10	4.44	5.76	0.33	0.66	Cholesterol Oxidase
	mg/dl	197	171	223	13.00	26.00	
Chloride	mmol/l	90.6	83.4	97.8	3.60	7.20	ISE indirect
CK Total	U/l	221	181	261	20.00	40.00	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	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	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	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	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	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	7.05	6.00	8.10	0.53	1.05	Hexokinase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	7.01	5.96	8.06	0.53	1.05	Glucose oxidase
	mg/dl	126	107	145	9.50	19.00	
HDL - Cholesterol	mmol/l	1.80	1.53	2.07	0.14	0.27	Direct HDL Roche 3rd generation
	mg/dl	69.5	59.1	79.9	5.20	10.40	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	437	371	503	33.00	66.00	P->L German methods 37°C
	U/l	316	268	364	24.00	48.00	P->L German methods 30°C
	U/l	222	188	256	17.00	34.00	P->L German methods 25°C
	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	32	25	39	3.50	7.00	Roche Colorimetric 37°C

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
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	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
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	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.2	34.1	52.3	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	126	107	145	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	98	83	113	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	81	68	94	6.50	13.00	Roche Integra AMP buffer 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	85	73	97	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.2	10.4	16.0	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	20.4	16.1	24.7	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.5	20.9	32.1	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.22	1.99	2.45	0.12	0.23	NM-BAPTA
	mg/dl	8.90	7.98	9.82	0.46	0.92	
Cholesterol	mmol/l	5.00	4.35	5.65	0.33	0.65	Cholesterol Oxidase
	mg/dl	193	168	218	12.50	25.00	
Chloride	mmol/l	90.3	83.1	97.5	3.60	7.20	ISE indirect
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.91	5.88	7.94	0.52	1.03	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
HDL - Cholesterol	mmol/l	1.76	1.49	2.03	0.14	0.27	Direct HDL Roche 3rd generation
	mg/dl	67.9	57.5	78.3	5.20	10.40	
Iron	µmol/l	18.2	15.0	21.4	1.60	3.20	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	220	187	253	16.50	33.00	L->P IFCC 37°C
	U/l	159	135	183	12.00	24.00	L->P IFCC 30°C
	U/l	112	95	129	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.00	3.41	4.59	0.30	0.59	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.7	34.5	52.9	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	244	193	295	25.50	51.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
	mmol/l	1.05	0.89	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.3	108	7.30	14.60	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.49	4.77	6.21	0.36	0.72	
	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.41	4.70	6.12	0.36	0.71	
Urea	mmol/l	6.84	5.81	7.87	0.52	1.03	Urease kinetic
	mg/dl	41.1	34.9	47.3	3.10	6.20	
	mmol/l	6.84	5.81	7.87	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.6	34.6	46.6	3.00	6.00	Bromocresol Green
	g/dl	4.06	3.46	4.66	0.30	0.60	
Alkaline Phosphatase	U/l	290	247	333	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	185	158	212	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.8	21.4	32.2	2.70	5.40	5th Generation Colorimetric
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	22.2	17.5	26.9	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.30	1.02	1.58	0.14	0.28	
	µmol/l	17.5	13.8	21.2	1.85	3.70	Vanadate Oxidation
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	35.8	28.3	43.3	3.75	7.50	Diazo with Sulphanilic Acid
	mg/dl	2.09	1.66	2.52	0.22	0.43	
	µmol/l	31.5	24.9	38.1	3.30	6.60	Vanadate Oxidation
	mg/dl	1.84	1.46	2.22	0.19	0.38	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	5.15	4.48	5.82	0.34	0.67	Cholesterol Oxidase
	mg/dl	199	173	225	13.00	26.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	95.3	87.7	103	3.80	7.60	ISE direct
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C
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	
	µmol/l	126	101	151	12.50	25.00	Randox Enzymatic
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.26	6.17	8.35	0.55	1.09	Hexokinase
	mg/dl	131	111	151	10.00	20.00	
	mmol/l	7.28	6.19	8.37	0.55	1.09	Glucose oxidase
	mg/dl	131	112	150	9.50	19.00	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Enzymatic Colorimetric
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	463	394	532	34.50	69.00	P->L German methods 37°C
	U/l	243	207	279	18.00	36.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Colorimetric
	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	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	

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RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	Enzymatic
	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - direct
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Sodium	mmol/l	140	133	147	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	µmol/l	50.2	39.7	60.7	5.25	10.50	Direct Colorimetric
	µg/dl	281	222	340	29.50	59.00	
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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	7.12	6.06	8.18	0.53	1.06	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	44.8	38.1	51.5	3.35	6.70	Bromocresol Purple
	g/dl	4.48	3.81	5.15	0.34	0.67	
Alkaline Phosphatase	U/l	275	234	316	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	190	161	219	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	187	159	215	14.00	28.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Oxidation to Biliverdin
	mg/dl	1.10	0.866	1.33	0.12	0.23	
Bilirubin Total	µmol/l	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.90	7.98	9.82	0.46	0.92	
	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.94	4.30	5.58	0.32	0.64	Cholesterol Oxidase
	mg/dl	191	166	216	12.50	25.00	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.8	89.0	105	3.90	7.80	ISE indirect
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	121	97.0	145	12.00	24.00	Randox Enzymatic UV method
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	122	97.6	146	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.93	5.89	7.97	0.52	1.04	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	7.12	6.05	8.19	0.54	1.07	Glucose oxidase
	mg/dl	128	109	147	9.50	19.00	
HDL - Cholesterol	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL Immunoseparation
	mg/dl	63.7	54.0	73.4	4.85	9.70	
	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct Clearance Method
	mg/dl	59.8	51.0	68.6	4.40	8.80	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.38	1.13	1.63	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.4	10.2	14.6	1.10	2.20	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	218	185	251	16.50	33.00	L->P 37°C
	U/l	450	382	518	34.00	68.00	P->L German methods 37°C
	U/l	222	189	255	16.50	33.00	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	39	31	47	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.03	2.57	0.14	0.27	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
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	
	µmol/l	51.2	40.5	61.9	5.35	10.70	Direct Colorimetric
	µg/dl	286	226	346	30.00	60.00	
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	0.93	1.27	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	97.4	82.1	113	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	

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RANDOX

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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RANDOX

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Purple
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	218	185	251	16.50	33.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer with P5P 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	49	39	59	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	13.9	11.0	16.8	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.813	0.644	0.982	0.08	0.17	
Bilirubin Total	µmol/l	30.4	24.0	36.8	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Cholesterol	mmol/l	4.37	3.80	4.94	0.29	0.57	Cholesterol Oxidase
	mg/dl	169	147	191	11.00	22.00	
	mmol/l	4.47	3.89	5.05	0.29	0.58	Dimension-Siemens reagents
	mg/dl	173	150	196	11.50	23.00	
Chloride	mmol/l	94.2	86.6	102	3.80	7.60	ISE indirect
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	

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RANDOX

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	66	56	76	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	7.08	6.02	8.14	0.53	1.06	Hexokinase
	mg/dl	128	108	148	10.00	20.00	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	133	106	160	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.03	3.44	4.62	0.30	0.59	
Potassium	mmol/l	3.88	3.57	4.19	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.6	49.3	73.9	6.15	12.30	Biuret reaction end point
	g/dl	6.16	4.93	7.39	0.62	1.23	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	87.8	73.7	102	7.05	14.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	

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RANDOX

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.32	6.23	8.41	0.55	1.09	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	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	42.8	36.3	49.3	3.25	6.50	Bromocresol Purple
	g/dl	4.28	3.63	4.93	0.33	0.65	
Alkaline Phosphatase	U/l	140	119	161	10.50	21.00	Siemens Dimension AMP buffer 37°C
	U/l	188	160	216	14.00	28.00	Randox AMP 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Siemens - maltopenta/hexaoside 37°C
	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	39	59	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
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	14.0	11.1	16.9	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.819	0.649	0.989	0.09	0.17	
Bilirubin Total	µmol/l	30.3	23.9	36.7	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	4.44	3.86	5.02	0.29	0.58	Dimension-Siemens reagents
	mg/dl	171	149	193	11.00	22.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	94.2	86.7	102	3.75	7.50	ISE indirect
CK Total	U/l	192	158	226	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	204	167	241	18.50	37.00	Dithioerythritol 37°C
	U/l	202	166	238	18.00	36.00	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	125	99.7	150	12.65	25.30	Randox Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	139	112	166	13.50	27.00	Jaffe rate blanked
	mg/dl	1.57	1.27	1.87	0.15	0.30	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	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
	U/l	65	55	75	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	7.11	6.05	8.17	0.53	1.06	Hexokinase
	mg/dl	128	109	147	9.50	19.00	
HDL - Cholesterol	mmol/l	1.91	1.62	2.20	0.15	0.29	Direct HDL PPD
	mg/dl	73.7	62.5	84.9	5.60	11.20	
	mmol/l	1.85	1.57	2.13	0.14	0.28	Direct HDL PEGME
	mg/dl	71.4	60.6	82.2	5.40	10.80	
	mmol/l	1.82	1.54	2.10	0.14	0.28	Direct Clearance Method
	mg/dl	70.3	59.4	81.2	5.45	10.90	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	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	
LD (LDH)	U/l	230	195	265	17.50	35.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	138	111	165	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.4	49.1	73.7	6.15	12.30	Biuret reaction end point
	g/dl	6.14	4.91	7.37	0.62	1.23	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.8	33.0	50.6	4.40	8.80	Removal of excess free iron
	µg/dl	234	184	284	25.00	50.00	
	µmol/l	39.2	30.9	47.5	4.15	8.30	Direct Colorimetric
	µg/dl	219	173	265	23.00	46.00	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.6	106	7.20	14.40	
	mmol/l	1.00	0.84	1.16	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	88.5	74.6	102	6.95	13.90	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.9	106	7.15	14.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	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	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease end point
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease kinetic
	mg/dl	20.0	17.0	23.0	1.50	3.00	
	mmol/l	7.13	6.06	8.20	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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RANDOX

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.8	36.3	49.3	3.25	6.50	Bromocresol Purple
	g/dl	4.28	3.63	4.93	0.33	0.65	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer with P5P 37°C
	U/l	43	34	52	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	38	58	5.00	10.00	Tris buffer with P5P 37°C
	U/l	47	38	56	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.3	11.4	17.2	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	14.0	11.1	16.9	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.819	0.649	0.989	0.09	0.17	
Bilirubin Total	µmol/l	30.3	23.9	36.7	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	4.42	3.84	5.00	0.29	0.58	Dimension-Siemens reagents
	mg/dl	171	148	194	11.50	23.00	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	188	154	222	17.00	34.00	Dithioerythritol 37°C
	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C

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RANDOX

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	128	102	154	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	125	99.8	150	12.60	25.20	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.90	5.86	7.94	0.52	1.04	Hexokinase
	mg/dl	124	106	142	9.00	18.00	
HDL - Cholesterol	mmol/l	1.82	1.55	2.09	0.14	0.27	Direct HDL PEGME
	mg/dl	70.3	59.8	80.8	5.25	10.50	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.38	1.13	1.63	0.13	0.25	UV LDH
	mg/dl	12.4	10.2	14.6	1.10	2.20	
LD (LDH)	U/l	233	198	268	17.50	35.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	142	114	170	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Methylthymol blue
	mg/dl	2.01	1.77	2.25	0.12	0.24	
Phosphate Inorganic	mmol/l	1.28	1.08	1.48	0.10	0.20	Phosphomolybdate UV
	mg/dl	3.97	3.35	4.59	0.31	0.62	

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RANDOX

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.85	3.54	4.16	0.16	0.31	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	137	130	144	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	104	87.3	121	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.31	0.27	0.35	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.12	4.45	5.79	0.34	0.67	
	mmol/l	0.31	0.27	0.36	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.28	4.59	5.97	0.35	0.69	
Urea	mmol/l	7.29	6.19	8.39	0.55	1.10	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

			Range				
Analyte	**unit**	**target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	5.24	4.56	5.92	0.34	0.68	Cholesterol Oxidase
	mg/dl	202	176	228	13.00	26.00	
Creatinine	µmol/l	119	95.4	143	11.80	23.60	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
Glucose	mmol/l	7.39	6.29	8.49	0.55	1.10	Glucose oxidase
	mg/dl	133	113	153	10.00	20.00	
Protein Total	g/l	67.3	53.9	80.7	6.70	13.40	Biuret reaction end point
	g/dl	6.73	5.39	8.07	0.67	1.34	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

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Cat. No. HN1530 / HS2611 Lot No. 890UN

Size: 20 x 5ml / 5 x 5ml Expiry: 2018-02

Analyte	unit	target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.38	6.27	8.49	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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