RANDOX 0086 CE

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

CAT. NO. HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1178UN **EXPIRY:** 2020-12-28

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.
However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –18°C to –24°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Purple
	g/dl	4.34	3.69	4.99	0.33	0.65	
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	157	133	181	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	108	91	125	8.50	17.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bile Acids	µmol/l	27.7	22.2	33.2	2.75	5.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	24.9	19.6	30.2	2.65	5.30	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	100	92.4	108	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Cholinesterase	U/l	6723	5378	8068	672.50	1345.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	14.6	11.7	17.5	1.45	2.90	Colorimetric
	µg/dl	92.9	74.4	111	9.25	18.50	
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	

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Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Hexokinase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PPD
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct Clearance Method
	mg/dl	52.9	44.8	61.0	4.05	8.10	
	mmol/l	1.35	1.15	1.55	0.10	0.20	HDL - Ultra
	mg/dl	52.1	44.4	59.8	3.85	7.70	
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	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.3	11.0	15.6	1.15	2.30	
LD (LDH)	U/l	187	159	215	14.00	28.00	L->P 37°C
	U/l	188	160	216	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.10	0.97	1.23	0.06	0.13	Spectrophotometric
	mg/dl	0.764	0.675	0.853	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III
	mg/dl	2.23	1.97	2.49	0.13	0.26	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
PSA Total	ng/ml =	12.0	9.00	15.0	1.50	3.00	Abbott Architect
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.18	0.95	1.42	0.12	0.24	Abbott Architect
TIBC	µmol/l	49.7	39.2	60.2	5.25	10.50	FE+UIBC(saturation with iron)
	µg/dl	278	219	337	29.50	59.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	79.1	109	7.35	14.70	
	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.6	111	7.50	15.00	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	

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Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Arsenazo III
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	3.88	3.57	4.19	0.16	0.31	ISE method - direct
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	46.6	39.6	53.6	3.50	7.00	Bromocresol Purple
	g/dl	4.66	3.96	5.36	0.35	0.70	
Alkaline Phosphatase	U/l	268	228	308	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	87	74	100	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	83	71	95	6.00	12.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	DPD (Beckman AU)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	98.0	90.1	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	235	192	278	21.50	43.00	CK-NAC substrate start (DGKC) 37°C
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	IDMS traceable
	mg/dl	1.44	1.15	1.73	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.30	0.25	0.34	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.36	1.15	1.57	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	52.5	44.4	60.6	4.05	8.10	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.36	1.16	1.56	0.10	0.20	HDL - Ultra
	mg/dl	52.5	44.8	60.2	3.85	7.70	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.9	120	9.05	18.10	
	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	185	157	213	14.00	28.00	L->P 37°C
	U/l	409	347	471	31.00	62.00	P->L Scandinavian & Dutch 37°C
	U/l	189	160	218	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	34	28	40	3.00	6.00	Other Colorimetric 37°C
	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.8	38.6	59.0	5.10	10.20	FE+UIBC(saturation with iron)
	µg/dl	273	216	330	28.50	57.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
	mmol/l	1.14	0.96	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.5	118	8.25	16.50	
UIBC	µmol/l	31.4	25.7	37.1	2.85	5.70	Direct Colorimetric
	µg/dl	176	144	208	16.00	32.00	
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	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Green
	g/dl	4.42	3.76	5.08	0.33	0.66	
	g/l	45.9	39.0	52.8	3.45	6.90	Bromocresol Purple
	g/dl	4.59	3.90	5.28	0.35	0.69	
Alkaline Phosphatase	U/l	177	150	204	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	175	149	201	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	36	29	43	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	14.4	11.5	17.3	1.45	2.90	Differential rate pH change
	mmol/l	15.3	12.1	18.5	1.60	3.20	Ion selective electrode
Bilirubin Direct	µmol/l	13.7	10.8	16.6	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.801	0.632	0.970	0.08	0.17	
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	99.2	91.3	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	201	164	238	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	211	173	249	19.00	38.00	Monothioglycerol 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	101	153	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.44	1.14	1.74	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	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	20.5	15.4	25.6	2.55	5.10	Beckman DxI800
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Beckman DxI800
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.96	5.07	6.85	0.45	0.89	Hexokinase
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	5.92	5.03	6.81	0.45	0.89	Oxygen electrode
	mg/dl	107	90.6	123	8.20	16.40	
	mmol/l	5.93	5.04	6.82	0.45	0.89	Glucose oxidase
	mg/dl	107	90.8	123	8.10	16.20	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	HDL - Ultra
	mg/dl	54.0	45.9	62.1	4.05	8.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	1.41	1.16	1.66	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.5	14.9	1.10	2.20	
LD (LDH)	U/l	161	137	185	12.00	24.00	L->P 37°C
	U/l	497	422	572	37.50	75.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Calmagite
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Osmolality	mOsm/kg	286	229	343	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction CX4/5/7
	g/dl	6.05	4.84	7.26	0.61	1.21	
	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
	g/l	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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.24	0.99	1.49	0.13	0.25	Beckman DxI800 Hyper TSH
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.5	119	8.25	16.50	
	mmol/l	1.15	0.96	1.34	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	102	85.3	119	8.35	16.70	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease end point
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.46	4.74	6.18	0.36	0.72	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.9	15.8	24.0	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.924	1.40	0.12	0.24	
Bilirubin Total	µmol/l	29.4	23.3	35.5	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C

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Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	123	98.4	148	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
Urea	mmol/l	6.80	5.78	7.82	0.51	1.02	Urease kinetic
	mg/dl	40.9	34.7	47.1	3.10	6.20	
	mmol/l	6.80	5.78	7.82	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Green
	g/dl	4.43	3.77	5.09	0.33	0.66	
	g/l	41.1	35.0	47.2	3.05	6.10	Turbidimetric Assays
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	77	66	88	5.50	11.00	Roche Integra AMP buffer 25°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 37°C
	U/l	90	77	103	6.50	13.00	AMP optimised to IFCC 30°C
	U/l	74	63	85	5.50	11.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Saccharogenic 37°C
	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic

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Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	17.9	14.1	21.7	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	25.1	19.9	30.3	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
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	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	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	125	99.9	150	12.55	25.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	6.16	5.23	7.09	0.47	0.93	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.67	1.42	1.92	0.13	0.25	Direct HDL PEGME
	mg/dl	64.5	54.8	74.2	4.85	9.70	
	mmol/l	1.70	1.44	1.96	0.13	0.26	Direct HDL Roche 3rd generation
	mg/dl	65.6	55.6	75.6	5.00	10.00	
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	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	1.20	2.40	
LD (LDH)	U/l	354	301	407	26.50	53.00	P->L German methods 37°C
	U/l	256	217	295	19.50	39.00	P->L German methods 30°C
	U/l	179	153	205	13.00	26.00	P->L German methods 25°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.655	0.831	0.04	0.09	
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.62	3.94	5.30	0.34	0.68	
	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	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	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	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.0	37.2	56.8	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	263	208	318	27.50	55.00	
Triglycerides	mmol/l	1.10	0.93	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Urea	mmol/l	6.77	5.75	7.79	0.51	1.02	Urease kinetic
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	6.77	5.75	7.79	0.51	1.02	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	

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Elitech/Vitalab Selectra Series

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Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Green
	g/dl	4.40	3.74	5.06	0.33	0.66	
Alkaline Phosphatase	U/l	276	234	318	21.00	42.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Glucose oxidase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	HDL - Ultra
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Protein Total	g/l	61.9	49.5	74.3	6.20	12.40	Biuret reaction end point
	g/dl	6.19	4.95	7.43	0.62	1.24	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.2	120	8.40	16.80	
Urea	mmol/l	7.11	6.05	8.17	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.4	49.0	3.15	6.30	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (non-prostatic)	U/l	3.88	2.60	5.16	0.64	1.28	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.87	2.59	5.15	0.64	1.28	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	10.7	7.17	14.2	1.77	3.53	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	18.9	12.7	25.1	3.10	6.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.6	9.78	19.4	2.41	4.82	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	22.8	15.3	30.3	3.75	7.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Green
	g/dl	4.37	3.72	5.02	0.33	0.65	
Alkaline Phosphatase	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	69	59	79	5.00	10.00	Roche Integra AMP buffer 25°C
	U/l	181	154	208	13.50	27.00	Randox AMP 37°C
	U/l	141	120	162	10.50	21.00	Randox AMP 30°C
	U/l	116	98	134	9.00	18.00	Randox AMP 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	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Randox Liquid Ethylidene 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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	24.6	19.5	29.7	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
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	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	94.8	87.2	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.22	5.28	7.16	0.47	0.94	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	64.8	55.2	74.4	4.80	9.60	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.45	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	363	309	417	27.00	54.00	P->L German methods 37°C
	U/l	262	223	301	19.50	39.00	P->L German methods 30°C
	U/l	184	157	211	13.50	27.00	P->L German methods 25°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C
	U/l	135	115	155	10.00	20.00	L->P IFCC 30°C
	U/l	95	81	109	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C

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Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
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	
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	
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	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.33	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	

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RANDOX

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	I.L. 2-chloro-pNPG3 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
Bile Acids	µmol/l	25.7	20.5	30.9	2.60	5.20	Enzymatic Colorimetric
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	81	67	95	7.00	14.00	CK-NAC (IFCC) 25°C

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
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	
D-3-Hydroxybutyrate	mmol/l	0.30	0.26	0.35	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	7	13	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	389	330	448	29.50	59.00	P->L German methods 37°C
	U/l	281	238	324	21.50	43.00	P->L German methods 30°C
	U/l	197	167	227	15.00	30.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.18	3.84	4.52	0.17	0.34	ISE method - indirect

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease end point
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	127	108	146	9.50	19.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	66	56	76	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.1	12.7	19.5	1.70	3.40	Ortho Vitros Microslide Systems
Bilirubin Direct	µmol/l	14.6	11.5	17.7	1.55	3.10	Vitros Total Bil - BU
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.37	1.08	1.66	0.15	0.29	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5577	4461	6693	558.00	1116.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	196	161	231	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	127	101	153	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.44	1.14	1.74	0.15	0.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	36.6	27.5	45.7	4.55	9.10	Vitros ECi
	ng/dl	2.85	2.15	3.55	0.35	0.70	
	pg/ml	28.5	21.5	35.5	3.50	7.00	Vitros ECi
gamma-GT	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.56	1.32	1.80	0.12	0.24	Vitros Magnetic HDL
	mg/dl	60.2	51.0	69.4	4.60	9.20	
	mmol/l	1.51	1.28	1.74	0.12	0.23	Vitros 5.1 FS microtip assay
	mg/dl	58.3	49.4	67.2	4.45	8.90	
	mmol/l	1.56	1.33	1.79	0.12	0.23	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	60.2	51.3	69.1	4.45	8.90	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.36	1.12	1.60	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	555	472	638	41.50	83.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	239	192	286	23.50	47.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.31	1.15	1.47	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.910	0.799	1.02	0.06	0.11	
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.28	2.00	2.56	0.14	0.28	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.71	4.00	5.42	0.36	0.71	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Ortho Vitros Microslide Systems
	g/dl	6.03	4.82	7.24	0.61	1.21	
PSA Total	ng/ml =	12.7	9.53	15.9	1.59	3.17	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.25	1.00	1.50	0.13	0.25	Vitros ECi
TIBC	µmol/l	53.9	42.6	65.2	5.65	11.30	Ortho Vitros Microslide Systems
	µg/dl	301	238	364	31.50	63.00	
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	6.66	5.66	7.66	0.50	1.00	Ortho Vitros Microslide Systems
	mg/dl	40.0	34.0	46.0	3.00	6.00	
	mmol/l	6.66	5.66	7.66	0.50	1.00	BUN
	mg/dl	18.7	15.9	21.5	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.49	4.77	6.21	0.36	0.72	

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

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	27.0	21.6	32.4	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.4	12.9	19.9	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.959	0.755	1.16	0.10	0.20	
Bilirubin Total	µmol/l	24.0	19.0	29.0	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	22.5	17.8	27.2	2.35	4.70	Nitrobenzenediazonium salt
	mg/dl	1.32	1.04	1.60	0.14	0.28	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	102	93.6	110	4.20	8.40	ISE direct
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
CK Total	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C

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

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.36	5.41	7.31	0.48	0.95	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.70	1.44	1.96	0.13	0.26	Direct HDL PEGME
	mg/dl	65.6	55.6	75.6	5.00	10.00	
Iron	µmol/l	19.7	16.1	23.3	1.80	3.60	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.00	2.56	0.14	0.28	
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.68	4.00	5.36	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - direct
Protein Total	g/l	60.9	48.7	73.1	6.10	12.20	Biuret reaction end point
	g/dl	6.09	4.87	7.31	0.61	1.22	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	

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

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.48	4.77	6.19	0.36	0.71	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	213	168	258	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	161	127	195	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	121	95	147	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	3.88	2.60	5.16	0.64	1.28	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.87	2.59	5.15	0.64	1.28	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	10.7	7.17	14.2	1.77	3.53	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	18.9	12.7	25.1	3.10	6.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.6	9.78	19.4	2.41	4.82	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	22.8	15.3	30.3	3.75	7.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	44.9	38.1	51.7	3.40	6.80	Bromocresol Purple
	g/dl	4.49	3.81	5.17	0.34	0.68	
	g/l	41.2	35.1	47.3	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.12	3.51	4.73	0.31	0.61	
	g/l	42.0	35.7	48.3	3.15	6.30	Turbidimetric Assays
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	127	108	146	9.50	19.00	Ortho Vitros Microslide Systems 37°C
	U/l	283	240	326	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	220	187	253	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	181	153	209	14.00	28.00	Diethanolamine buffer DEA 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	165	140	190	12.50	25.00	AMP non-optimised 37°C
	U/l	129	109	149	10.00	20.00	AMP non-optimised 30°C
	U/l	105	89	121	8.00	16.00	AMP non-optimised 25°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	67	57	77	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	91	78	104	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	74	63	85	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	99	85	113	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	87	74	100	6.50	13.00	Saccharogenic 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	66	56	76	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	88	74	102	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	101	85	117	8.00	16.00	Siemens 2-chloro-pNPG3 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	91	78	104	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	108	91	125	8.50	17.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.16	0.95	1.37	0.10	0.21	Immunoturbidimetric
	mg/dl	116	95.1	137	10.45	20.90	
Apolipoprotein B	g/l	0.64	0.53	0.76	0.06	0.12	Immunoturbidimetric
	mg/dl	64.4	52.8	76.0	5.80	11.60	
AST (GOT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer with P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer with P5P 25°C
	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
	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

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Colorimetric
	mmol/l	14.4	11.5	17.3	1.45	2.90	Differential rate pH change
	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
	mmol/l	16.0	12.6	19.4	1.70	3.40	Ion selective electrode
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	4th Generation Colorimetric
	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.959	1.46	0.13	0.25	
	µmol/l	14.6	11.5	17.7	1.55	3.10	Vitros Total Bil - BU
	mg/dl	0.854	0.673	1.04	0.09	0.18	
	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	16.1	12.7	19.5	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.743	1.14	0.10	0.20	
	µmol/l	15.1	11.9	18.3	1.60	3.20	Modified Jendrassik
	mg/dl	0.883	0.696	1.07	0.09	0.19	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.37	1.08	1.66	0.15	0.29	
	µmol/l	32.0	25.3	38.7	3.35	6.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.87	1.48	2.26	0.20	0.39	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	28.3	22.4	34.2	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	23.5	18.6	28.4	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	32.8	25.9	39.7	3.45	6.90	Modified Jendrassik
	mg/dl	1.92	1.52	2.32	0.20	0.40	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.35	2.11	2.59	0.12	0.24	Methylthymol blue
	mg/dl	9.42	8.46	10.4	0.48	0.96	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	99.5	91.5	108	4.00	8.00	Colorimetric

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	97.1	89.3	105	3.90	7.80	ISE indirect
	mmol/l	99.5	91.5	108	4.00	8.00	ISE direct
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
Cholinesterase	U/l	5472	4378	6566	547.00	1094.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	196	161	231	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	216	177	255	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC serum start (DGKC) 25°C
	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	211	173	249	19.00	38.00	Monothioglycerol 37°C
	U/l	132	108	156	12.00	24.00	Monothioglycerol 30°C
	U/l	90	74	106	8.00	16.00	Monothioglycerol 25°C
	U/l	203	166	240	18.50	37.00	Dithioerythritol 37°C
	U/l	127	104	150	11.50	23.00	Dithioerythritol 30°C
	U/l	86	71	101	7.50	15.00	Dithioerythritol 25°C
	U/l	190	156	224	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	119	98	140	10.50	21.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	81	66	96	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)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Copper	µmol/l	18.1	14.5	21.7	1.80	3.60	Atomic absorption
	µg/dl	115	92.2	138	11.40	22.80	
	µmol/l	18.8	15.0	22.6	1.90	3.80	Colorimetric
	µg/dl	120	95.4	145	12.30	24.60	
Cortisol	nmol/l	502	377	627	62.50	125.00	Roche Cobas E411
	µg/dl	18.1	13.6	22.6	2.25	4.50	
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.90	1.52	2.28	0.19	0.38	Immunoturbidimetric
	ng/ml	1.48	1.19	1.77	0.15	0.29	
Folate	nmol/l	43.3	32.9	53.7	5.20	10.40	Roche Cobas E411
	ng/ml	19.1	14.5	23.7	2.30	4.60	
Free T4	pmol/l	18.1	13.6	22.6	2.25	4.50	Abbott Architect
	ng/dl	1.41	1.06	1.76	0.18	0.35	
	pg/ml	14.1	10.6	17.6	1.75	3.50	Abbott Architect
	pmol/l	18.8	14.1	23.5	2.35	4.70	Siemens Centaur XP/XPT/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/XPT/Classic
	pmol/l	21.6	16.2	27.0	2.70	5.40	Beckman Access
	ng/dl	1.68	1.26	2.10	0.21	0.42	
	pg/ml	16.8	12.6	21.0	2.10	4.20	Beckman Access
	pmol/l	20.5	15.4	25.6	2.55	5.10	Beckman DxI800
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Beckman DxI800
	pmol/l	20.3	15.2	25.4	2.55	5.10	Siemens Immulite 2000/2500
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Siemens Immulite 2000/2500
	pmol/l	36.6	27.5	45.7	4.55	9.10	Vitros ECi
	ng/dl	2.85	2.15	3.55	0.35	0.70	
	pg/ml	28.5	21.5	35.5	3.50	7.00	Vitros ECi
	pmol/l	24.0	18.0	30.0	3.00	6.00	Roche Elecsys
	ng/dl	1.87	1.40	2.34	0.24	0.47	
	pg/ml	18.7	14.0	23.4	2.35	4.70	Roche Elecsys

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	23.9	17.9	29.9	3.00	6.00	Roche Modular E170
	ng/dl	1.86	1.40	2.32	0.23	0.46	
	pg/ml	18.6	14.0	23.2	2.30	4.60	Roche Modular E170
	pmol/l	24.0	18.0	30.0	3.00	6.00	Roche Cobas E411
	ng/dl	1.87	1.40	2.34	0.24	0.47	
	pg/ml	18.7	14.0	23.4	2.35	4.70	Roche Cobas E411
	pmol/l	24.1	18.1	30.1	3.00	6.00	Roche Cobas 6000/8000
	ng/dl	1.88	1.41	2.35	0.24	0.47	
	pg/ml	18.8	14.1	23.5	2.35	4.70	Roche Cobas 6000/8000
	pmol/l	22.5	16.9	28.1	2.80	5.60	Biomerieux Vidas FT4N Kit
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.99	6.39	9.59	0.80	1.60	Immunoturbidimetric
	µg/ml	3.82	3.05	4.59	0.39	0.77	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	37	49	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose dehydrogenase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.05	5.15	6.95	0.45	0.90	Oxygen electrode
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL PPD
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.72	1.46	1.98	0.13	0.26	Direct HDL PEGME
	mg/dl	66.4	56.4	76.4	5.00	10.00	
	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct Clearance Method
	mg/dl	44.8	38.1	51.5	3.35	6.70	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Vitros 5.1 FS microtip assay
	mg/dl	58.3	49.4	67.2	4.45	8.90	
	mmol/l	1.56	1.33	1.79	0.12	0.23	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	60.2	51.3	69.1	4.45	8.90	
	mmol/l	1.66	1.41	1.91	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	64.1	54.4	73.8	4.85	9.70	
	mmol/l	1.35	1.15	1.55	0.10	0.20	HDL - Ultra
	mg/dl	52.1	44.4	59.8	3.85	7.70	
Immunoglobulin A	g/l	1.66	1.25	2.07	0.21	0.41	Immunoturbidimetric
	mg/dl	166	125	207	20.50	41.00	
Immunoglobulin G	g/l	6.26	5.13	7.39	0.57	1.13	Immunoturbidimetric
	mg/dl	626	513	739	56.50	113.00	
Immunoglobulin M	g/l	0.77	0.62	0.92	0.08	0.15	Immunoturbidimetric
	mg/dl	76.9	61.5	92.3	7.70	15.40	
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	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
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	
	mmol/l	1.36	1.12	1.60	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
	mmol/l	1.51	1.23	1.79	0.14	0.28	UV LDH
	mg/dl	13.6	11.1	16.1	1.25	2.50	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LAP	U/l	16	14	18	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	555	472	638	41.50	83.00	Ortho Vitros Microslide Systems 37°C
	U/l	173	147	199	13.00	26.00	L->P 37°C
	U/l	125	106	144	9.50	19.00	L->P 30°C
	U/l	88	75	101	6.50	13.00	L->P 25°C
	U/l	409	348	470	30.50	61.00	P->L Scandinavian & Dutch 37°C
	U/l	295	251	339	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	207	176	238	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l	375	319	431	28.00	56.00	P->L German methods 37°C
	U/l	271	230	312	20.50	41.00	P->L German methods 30°C
	U/l	190	162	218	14.00	28.00	P->L German methods 25°C
	U/l	391	332	450	29.50	59.00	P->L SFBC 37°C
	U/l	282	240	324	21.00	42.00	P->L SFBC 30°C
	U/l	198	168	228	15.00	30.00	P->L SFBC 25°C
	U/l	190	162	218	14.00	28.00	L->P IFCC 37°C
	U/l	137	117	157	10.00	20.00	L->P IFCC 30°C
	U/l	96	82	110	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
	U/l	239	192	286	23.50	47.00	Ortho Vitros Microslide Systems 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
	U/l	180	144	216	18.00	36.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.31	1.15	1.47	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.910	0.799	1.02	0.06	0.11	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.06	0.93	1.19	0.07	0.13	Ion selective electrode
	mg/dl	0.736	0.646	0.826	0.05	0.09	
	mmol/l	1.06	0.94	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.649	0.823	0.04	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Randox Colorimetric
	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	Arsenazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.28	2.00	2.56	0.14	0.28	
	mmol/l	0.92	0.81	1.04	0.06	0.11	Calmagite
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.28	2.00	2.56	0.14	0.28	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic
	mg/dl	2.18	1.92	2.44	0.13	0.26	
NEFA	mmol/l	2.41	2.05	2.77	0.18	0.36	Colorimetric
Osmolality	mOsm/kg	293	234	352	29.50	59.00	Calculated
	mOsm/kg	308	247	369	30.50	61.00	Freezing point depression
	mOsm/kg	314	251	377	31.50	63.00	Vapour pressure
Paracetamol	mmol/l	0.07	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.0	8.78	13.2	1.11	2.22	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.59	3.91	5.27	0.34	0.68	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.05	3.73	4.37	0.16	0.32	Enzymatic
	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - direct
	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Ortho Vitros Microslide Systems
	g/dl	6.03	4.82	7.24	0.61	1.21	
	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	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction kinetic
	g/dl	5.88	4.70	7.06	0.59	1.18	
PSA Total	ng/ml =	14.5	10.8	18.2	1.85	3.70	Roche Elecsys Modular E170
	ng/ml =	14.7	11.1	18.3	1.80	3.60	bioMerieux VIDAS TPSA
	ng/ml =	11.4	8.53	14.3	1.44	2.87	Siemens Centaur XP/XPT/Classic
	ng/ml =	12.0	8.97	15.0	1.52	3.03	Abbott Architect
	ng/ml =	14.7	11.0	18.4	1.85	3.70	Cobas E411
	ng/ml =	14.0	10.5	17.5	1.75	3.50	Roche Cobas 6000/8000
Salicylate	mmol/l	0.39	0.31	0.47	0.04	0.08	Enzymatic
	mg/dl	5.40	4.32	6.48	0.54	1.08	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	30.2	24.2	36.2	3.00	6.00	Immunoturbidimetric
	µg/ml	5.44	4.36	6.52	0.54	1.08	
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.12	0.23	Abbott Architect
	µU/ml =	1.23	0.99	1.47	0.12	0.24	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.44	1.15	1.73	0.15	0.29	bioMerieux VIDAS TSH
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Vitros ECi
	µU/ml =	1.49	1.19	1.79	0.15	0.30	Roche Elecsys
	µU/ml =	1.46	1.17	1.75	0.15	0.29	Roche Modular E170
	µU/ml =	1.46	1.17	1.75	0.15	0.29	Roche Cobas E411
	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Beckman DxI800 Hyper TSH
	µU/ml =	1.28	1.02	1.54	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	53.9	42.6	65.2	5.65	11.30	Ortho Vitros Microslide Systems
	µg/dl	301	238	364	31.50	63.00	
	µmol/l	44.8	35.4	54.2	4.70	9.40	Removal of excess free iron
	µg/dl	250	198	302	26.00	52.00	
	µmol/l	46.9	37.1	56.7	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	262	207	317	27.50	55.00	
	µmol/l	49.9	39.4	60.4	5.25	10.50	Direct Colorimetric
	µg/dl	279	220	338	29.50	59.00	
	µmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	µg/dl	255	202	308	26.50	53.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	54.6	43.1	66.1	5.75	11.50	Randox Direct
	µg/dl	305	241	369	32.00	64.00	
Tobramycin	µmol/l	5.30	4.24	6.36	0.53	1.06	Immunoturbidimetric
	µg/ml	2.48	1.98	2.98	0.25	0.50	
Total T3	nmol/l	2.01	1.50	2.52	0.26	0.51	Abbott Architect
	ng/ml	1.31	0.977	1.64	0.17	0.33	
	ng/dl	131	97.7	164	16.65	33.30	Abbott Architect
	nmol/l	2.34	1.75	2.93	0.30	0.59	Siemens Centaur XP/XPT/Classic
	ng/ml	1.52	1.14	1.90	0.19	0.38	
	ng/dl	152	114	190	19.00	38.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.39	1.79	2.99	0.30	0.60	Roche Cobas 6000/8000
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Roche Cobas 6000/8000
Total T4	nmol/l	90.4	67.8	113	11.30	22.60	Abbott Architect
	µg/dl	7.05	5.29	8.81	0.88	1.76	
	ng/ml	70.5	52.9	88.1	8.80	17.60	Abbott Architect
	nmol/l	94.0	70.5	118	11.75	23.50	Siemens Centaur XP/XPT/Classic
	µg/dl	7.33	5.50	9.16	0.92	1.83	
	ng/ml	73.3	55.0	91.6	9.15	18.30	Siemens Centaur XP/XPT/Classic
	nmol/l	88.5	66.4	111	11.05	22.10	BioMerieux Vidas
	µg/dl	6.90	5.18	8.62	0.86	1.72	
	ng/ml	69.0	51.8	86.2	8.60	17.20	BioMerieux Vidas
	nmol/l	90.5	67.9	113	11.30	22.60	Siemens Immulite 2000/2500
	µg/dl	7.06	5.30	8.82	0.88	1.76	
	ng/ml	70.6	53.0	88.2	8.80	17.60	Siemens Immulite 2000/2500

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	92.1	69.1	115	11.50	23.00	Roche Cobas E411
	µg/dl	7.18	5.39	8.97	0.90	1.79	
	ng/ml	71.8	53.9	89.7	8.95	17.90	Roche Cobas E411
	nmol/l	91.8	68.9	115	11.45	22.90	Roche Cobas 6000/8000
	µg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Roche Cobas 6000/8000
Transferrin	g/l	1.80	1.44	2.16	0.18	0.36	Immunoturbidimetric
	mg/dl	180	144	216	18.00	36.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.2	110	7.75	15.50	
	mmol/l	1.20	1.01	1.39	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	106	89.4	123	8.30	16.60	
UIBC	µmol/l	28.0	23.0	33.0	2.50	5.00	Direct Colorimetric
	µg/dl	157	129	185	14.00	28.00	
Urea	mmol/l	6.66	5.66	7.66	0.50	1.00	Ortho Vitros Microslide Systems
	mg/dl	40.0	34.0	46.0	3.00	6.00	
	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease end point
	mg/dl	43.9	37.3	50.5	3.30	6.60	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	7.00	5.95	8.05	0.53	1.05	Urease hypochlorite
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	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	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.49	4.77	6.21	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Vitamin B12	pmol/l	474	379	569	47.50	95.00	Roche Cobas E411
	pg/ml	642	514	770	64.00	128.00	
Zinc	µmol/l	35.9	28.7	43.1	3.60	7.20	Atomic absorption
	µg/dl	234	187	281	23.50	47.00	
	µmol/l	35.3	28.2	42.4	3.55	7.10	Colorimetric with deproteinisation
	µg/dl	231	184	278	23.50	47.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		68.1	61.4	74.8	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		2.9	2.2	3.6	0.35	0.70	% of total Protein (Beckman Capillary)
alpha-2-globulin		9.2	7.0	11.4	1.11	2.21	% of total Protein (Beckman Capillary)
beta-globulin		10.3	7.8	12.8	1.24	2.47	% of total Protein (Beckman Capillary)
gamma-globulin		9.5	7.2	11.8	1.14	2.28	% of total Protein (Beckman Capillary)

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.06	3.54	4.58	0.26	0.52	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°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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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	189	160	218	14.50	29.00	L->P IFCC 37°C
	U/l	136	116	156	10.00	20.00	L->P IFCC 30°C
	U/l	96	81	111	7.50	15.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Urea	mmol/l	7.50	6.37	8.63	0.57	1.13	Urease end point
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	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	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	23.1	18.2	28.0	2.45	4.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Cholesterol	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	220	180	260	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
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.96	5.07	6.85	0.45	0.89	Glucose oxidase
	mg/dl	107	91.4	123	7.80	15.60	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Protein Total	g/l	56.1	44.9	67.3	5.60	11.20	Biuret reaction end point
	g/dl	5.61	4.49	6.73	0.56	1.12	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.33	4.62	6.04	0.36	0.71	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Green
	g/dl	4.40	3.74	5.06	0.33	0.66	
	g/l	43.8	37.3	50.3	3.25	6.50	Bromocresol Purple
	g/dl	4.38	3.73	5.03	0.33	0.65	
	g/l	43.1	36.6	49.6	3.25	6.50	Turbidimetric Assays
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	95	81	109	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	78	66	90	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Colorimetric
	mmol/l	14.7	11.6	17.8	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.6	22.2	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Roche JG factored
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	93.3	85.8	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Cholinesterase	U/l	5287	4229	6345	529.00	1058.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	191	157	225	17.00	34.00	Creatinine phosphate substrate Start 37°C
	U/l	120	98	142	11.00	22.00	Creatinine phosphate substrate Start 30°C
	U/l	81	67	95	7.00	14.00	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	24.1	18.1	30.1	3.00	6.00	Roche Cobas 6000/8000
	ng/dl	1.88	1.41	2.35	0.24	0.47	
	pg/ml	18.8	14.1	23.5	2.35	4.70	Roche Cobas 6000/8000
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	45	59	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	28	36	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	5.96	5.06	6.86	0.45	0.90	Glucose dehydrogenase
	mg/dl	107	91.2	123	7.90	15.80	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL PEGME
	mg/dl	64.8	55.2	74.4	4.80	9.60	
	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	63.7	54.0	73.4	4.85	9.70	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.9	120	9.05	18.10	
	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	1.45	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	373	317	429	28.00	56.00	P->L German methods 37°C
	U/l	269	229	309	20.00	40.00	P->L German methods 30°C
	U/l	189	161	217	14.00	28.00	P->L German methods 25°C
	U/l	190	162	218	14.00	28.00	L->P IFCC 37°C
	U/l	137	117	157	10.00	20.00	L->P IFCC 30°C
	U/l	96	82	110	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.646	0.826	0.05	0.09	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.01	2.57	0.14	0.28	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.28	2.00	2.56	0.14	0.28	
Osmolality	mOsm/kg	287	230	344	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
	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 =	14.0	10.5	17.5	1.75	3.50	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000
TIBC	µmol/l	44.7	35.3	54.1	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	197	303	26.50	53.00	
	µmol/l	47.3	37.3	57.3	5.00	10.00	Calculated from Transferrin
	µg/dl	264	209	319	27.50	55.00	
Total T3	nmol/l	2.39	1.79	2.99	0.30	0.60	Roche Cobas 6000/8000
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Roche Cobas 6000/8000

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	91.8	68.9	115	11.45	22.90	Roche Cobas 6000/8000
	µg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Roche Cobas 6000/8000
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	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
UIBC	µmol/l	26.7	21.9	31.5	2.40	4.80	Direct Colorimetric
	µg/dl	149	122	176	13.50	27.00	
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.82	6.24	0.36	0.71	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.53	4.80	6.26	0.37	0.73	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.4	37.8	51.0	3.30	6.60	Bromocresol Green
	g/dl	4.44	3.78	5.10	0.33	0.66	
Alkaline Phosphatase	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	76	65	87	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	77	105	7.00	14.00	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
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
	mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	99.7	91.8	108	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	133	110	156	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	91	74	108	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
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	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL Roche 3rd generation
	mg/dl	67.2	57.1	77.3	5.05	10.10	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	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
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
Urea	mmol/l	6.83	5.81	7.85	0.51	1.02	Urease kinetic
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.83	5.81	7.85	0.51	1.02	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Green
	g/dl	4.43	3.77	5.09	0.33	0.66	
	g/l	44.5	37.9	51.1	3.30	6.60	Bromocresol Purple
	g/dl	4.45	3.79	5.11	0.33	0.66	
Alkaline Phosphatase	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	77	66	88	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	90	76	104	7.00	14.00	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	14.6	11.6	17.6	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	93.8	86.3	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
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	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	135	108	162	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
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

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.69	1.44	1.94	0.13	0.25	Direct HDL PEGME
	mg/dl	65.2	55.6	74.8	4.80	9.60	
	mmol/l	1.69	1.44	1.94	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	65.2	55.6	74.8	4.80	9.60	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.45	1.18	1.72	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.6	15.6	1.25	2.50	
LD (LDH)	U/l	373	317	429	28.00	56.00	P->L German methods 37°C
	U/l	269	229	309	20.00	40.00	P->L German methods 30°C
	U/l	189	161	217	14.00	28.00	P->L German methods 25°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	97	83	111	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
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	
	mmol/l	0.95	0.84	1.06	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.31	2.03	2.59	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	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	145	138	152	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Green
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	83	70	96	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	68	58	78	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	90	76	104	7.00	14.00	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	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.8	14.9	22.7	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.872	1.33	0.11	0.23	
Bilirubin Total	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.39	1.10	1.68	0.15	0.29	
	µmol/l	24.0	18.9	29.1	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.10	1.68	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	137	109	165	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	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	6.07	5.16	6.98	0.46	0.91	Hexokinase
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.60	1.36	1.84	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	61.8	52.5	71.1	4.65	9.30	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	193	164	222	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	98	83	113	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Spectrophotometric
	mg/dl	0.743	0.653	0.833	0.05	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	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	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	259	205	313	27.00	54.00	
	µmol/l	45.3	35.8	54.8	4.75	9.50	Calculated from Transferrin
	µg/dl	253	200	306	26.50	53.00	
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	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
UIBC	µmol/l	28.5	23.4	33.6	2.55	5.10	Direct Colorimetric
	µg/dl	159	131	187	14.00	28.00	
Urea	mmol/l	6.94	5.90	7.98	0.52	1.04	Urease kinetic
	mg/dl	41.7	35.5	47.9	3.10	6.20	
	mmol/l	6.94	5.90	7.98	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.49	4.77	6.21	0.36	0.72	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.48	4.75	6.21	0.37	0.73	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	317	269	365	24.00	48.00	Diethanolamine buffer DEA 37°C
	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	16.1	12.7	19.5	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.743	1.14	0.10	0.20	
Bilirubin Total	µmol/l	31.3	24.7	37.9	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	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	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE direct

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.26	3.70	4.82	0.28	0.56	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	214	175	253	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	231	189	273	21.00	42.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
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	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	391	332	450	29.50	59.00	P->L German methods 37°C
	U/l	189	161	217	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Colorimetric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
Magnesium	mmol/l	0.98	0.86	1.09	0.06	0.12	Xylidyl Blue
	mg/dl	2.37	2.08	2.66	0.15	0.29	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	Enzymatic
	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - direct
Protein Total	g/l	61.2	48.9	73.5	6.15	12.30	Biuret reaction end point
	g/dl	6.12	4.89	7.35	0.62	1.23	
Sodium	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
TIBC	µmol/l	54.6	43.1	66.1	5.75	11.50	Direct Colorimetric
	µg/dl	305	241	369	32.00	64.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
Urea	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Purple
	g/dl	4.40	3.74	5.06	0.33	0.66	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	91	78	104	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	16.9	13.4	20.4	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	15.7	12.4	19.0	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	27.3	21.5	33.1	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	99.4	91.5	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	5860	4688	7032	586.00	1172.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	104	154	12.50	25.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Hexokinase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.05	0.90	1.20	0.08	0.15	Direct Clearance Method
	mg/dl	40.5	34.6	46.4	2.95	5.90	
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	1.30	1.06	1.54	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	11.7	9.55	13.9	1.08	2.15	
LD (LDH)	U/l	184	156	212	14.00	28.00	L->P 37°C
	U/l	367	312	422	27.50	55.00	P->L German methods 37°C
	U/l	192	164	220	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	

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RANDOX

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	51.4	40.6	62.2	5.40	10.80	Direct Colorimetric
	µg/dl	287	227	347	30.00	60.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.1	121	8.45	16.90	
Urea	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Purple
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	151	128	174	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	42	34	50	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	12.8	10.1	15.5	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.749	0.591	0.907	0.08	0.16	
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.74	3.25	4.23	0.25	0.49	Dimension-Siemens reagents
	mg/dl	144	125	163	9.50	19.00	
CK Total	U/l	199	164	234	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	190	156	224	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**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	130	104	156	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	139	111	167	14.00	28.00	IDMS traceable
	mg/dl	1.57	1.25	1.89	0.16	0.32	
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL PPD
	mg/dl	67.2	57.1	77.3	5.05	10.10	
	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL PEGME
	mg/dl	67.2	57.1	77.3	5.05	10.10	
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	83.3	119	8.85	17.70	
	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	183	156	210	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	178	151	205	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	144	116	172	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	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	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.4	35.8	55.0	4.80	9.60	Removal of excess free iron
	µg/dl	254	200	308	27.00	54.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	78.0	108	7.45	14.90	
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	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.91	6.35	0.36	0.72	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	45.0	38.2	51.8	3.40	6.80	Bromocresol Purple
	g/dl	4.50	3.82	5.18	0.34	0.68	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	143	121	165	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	178	151	205	13.50	27.00	Randox AMP 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	41	63	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.4	13.8	21.0	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	12.4	9.80	15.0	1.30	2.60	Diazo with Sulphanilic Acid
	mg/dl	0.725	0.573	0.877	0.08	0.15	
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.06	1.85	2.27	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.26	7.41	9.11	0.43	0.85	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.75	3.27	4.23	0.24	0.48	Dimension-Siemens reagents
	mg/dl	145	126	164	9.50	19.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	202	166	238	18.00	36.00	Dithioerythritol 37°C
Creatinine	µmol/l	138	110	166	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	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	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.78	1.51	2.05	0.14	0.27	Direct HDL PPD
	mg/dl	68.7	58.3	79.1	5.20	10.40	
	mmol/l	1.79	1.52	2.06	0.14	0.27	Direct HDL PEGME
	mg/dl	69.1	58.7	79.5	5.20	10.40	
	mmol/l	1.56	1.33	1.79	0.12	0.23	Direct Clearance Method
	mg/dl	60.2	51.3	69.1	4.45	8.90	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
LD (LDH)	U/l	180	153	207	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	182	155	209	13.50	27.00	L->P IFCC 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	138	111	165	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	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.5	49.2	73.8	6.15	12.30	Biuret reaction end point
	g/dl	6.15	4.92	7.38	0.62	1.23	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.0	33.9	52.1	4.55	9.10	Removal of excess free iron
	µg/dl	240	190	290	25.00	50.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	76.1	105	7.10	14.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.8	109	7.50	15.00	
Urea	mmol/l	7.17	6.09	8.25	0.54	1.08	Urease end point
	mg/dl	43.1	36.6	49.6	3.25	6.50	
	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	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1178UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.58	4.86	6.30	0.36	0.72	

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