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. 1284UN **EXPIRY:** 2022-02-28

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 2 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. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Purple
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	168	142	194	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	62	52	72	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	Enzymatic Colorimetric
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	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.825	1.26	0.11	0.22	
	µmol/l	18.0	14.3	21.7	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.05	0.837	1.26	0.11	0.21	
Bilirubin Total	µmol/l	25.9	20.4	31.4	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	µmol/l	26.5	21.0	32.0	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.23	1.87	0.16	0.32	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	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	2.10	1.89	2.31	0.11	0.21	Arsenazo III
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Chloride	mmol/l	97.1	89.3	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Cholinesterase	U/l	6760	5408	8112	676.00	1352.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	124	98.9	149	12.55	25.10	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	

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Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Glucose oxidase
	mg/dl	114	96.4	132	8.80	17.60	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PPD
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.27	1.08	1.46	0.10	0.19	HDL - Ultra
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	µmol/l	20.3	16.7	23.9	1.80	3.60	Colorimetric with ppt.
	µg/dl	113	93.4	133	9.80	19.60	
	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	198	169	227	14.50	29.00	L->P 37°C
	U/l	197	168	226	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.623	0.793	0.04	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Arsenazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.98	2.50	0.13	0.26	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.06	3.44	4.68	0.31	0.62	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
PSA Total	ng/ml =	10.8	8.11	13.5	1.35	2.69	Abbott Architect
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.2	33.4	51.0	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	236	187	285	24.50	49.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.1	116	7.95	15.90	
	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	
	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	101	85.0	117	8.00	16.00	
UIBC	µmol/l	21.6	17.7	25.5	1.95	3.90	Direct Colorimetric
	µg/dl	121	98.9	143	11.05	22.10	
Urea	mmol/l	7.57	6.43	8.71	0.57	1.14	Urease end point
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	7.77	6.61	8.93	0.58	1.16	Urease kinetic
	mg/dl	46.7	39.7	53.7	3.50	7.00	
	mmol/l	7.77	6.60	8.94	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	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	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	158	135	181	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	48	38	58	5.00	10.00	Agappee - IFCC 37°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	41	33	49	4.00	8.00	Agappee - IFCC 37°C
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Agappe - GOD-PAP
	mg/dl	112	95.5	129	8.25	16.50	
Phosphate Inorganic	mmol/l	1.57	1.34	1.80	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.87	4.15	5.59	0.36	0.72	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - direct
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Agappe - Biuret
	g/dl	6.01	4.81	7.21	0.60	1.20	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease end point
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	

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Beckman Coulter AU Series®

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.5	45.5	3.00	6.00	Bromocresol Green
	g/dl	3.95	3.35	4.55	0.30	0.60	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	86	73	99	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	87	74	100	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	13.0	19.6	1.65	3.30	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	
Bilirubin Total	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	30.2	23.9	36.5	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.3	22.3	34.3	3.00	6.00	DPD (Beckman AU)
	mg/dl	1.66	1.30	2.02	0.18	0.36	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	95.7	88.0	103	3.85	7.70	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	5453	4362	6544	545.50	1091.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	223	183	263	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	17.2	13.8	20.6	1.70	3.40	Colorimetric
	µg/dl	109	87.8	130	10.60	21.20	
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	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	123	98.1	148	12.45	24.90	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	118	94.3	142	11.85	23.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	124	99.0	149	12.50	25.00	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	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	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.29	1.09	1.49	0.10	0.20	HDL - Ultra
	mg/dl	49.8	42.1	57.5	3.85	7.70	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.7	132	10.15	20.30	
	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	193	164	222	14.50	29.00	L->P 37°C
	U/l	438	372	504	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.625	0.791	0.04	0.08	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.6	46.0	69.2	5.80	11.60	Biuret reaction end point
	g/dl	5.76	4.60	6.92	0.58	1.16	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction kinetic
	g/dl	5.73	4.58	6.88	0.58	1.15	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.9	36.3	55.5	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	257	203	311	27.00	54.00	
Total T4	nmol/l	108	80.8	135	13.60	27.20	Microgenics DRI assay
	µg/dl	8.42	6.30	10.5	1.06	2.12	
	ng/ml	84.2	63.0	105	10.60	21.20	Microgenics DRI assay
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.21	1.02	1.40	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	107	90.3	124	8.35	16.70	
UIBC	µmol/l	26.0	21.3	30.7	2.35	4.70	Direct Colorimetric
	µg/dl	145	119	171	13.00	26.00	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.99	6.79	9.19	0.60	1.20	Urease end point
	mg/dl	48.0	40.8	55.2	3.60	7.20	
	mmol/l	7.84	6.66	9.02	0.59	1.18	Urease kinetic
	mg/dl	47.1	40.0	54.2	3.55	7.10	
	mmol/l	7.84	6.66	9.02	0.59	1.18	BUN
	mg/dl	22.0	18.7	25.3	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			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	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	178	152	204	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	41	33	49	4.00	8.00	Tris buffer SCE 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.2	12.9	19.5	1.65	3.30	Differential rate pH change
	mmol/l	16.4	13.0	19.8	1.70	3.40	Ion selective electrode
Bilirubin Direct	µmol/l	11.9	9.43	14.4	1.24	2.47	Diazo with Sulphanilic Acid
	mg/dl	0.696	0.552	0.840	0.07	0.14	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.07	1.87	2.27	0.10	0.20	Ion selective electrode
	mg/dl	8.30	7.49	9.11	0.41	0.81	
	mmol/l	2.06	1.85	2.27	0.11	0.21	Arsenazo III
	mg/dl	8.26	7.41	9.11	0.43	0.85	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.7	88.9	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	220	181	259	19.50	39.00	Monothioglycerol 37°C
	U/l	213	174	252	19.50	39.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	123	98.6	147	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.9	150	12.55	25.10	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Free T3	pmol/l	6.82	5.11	8.53	0.86	1.71	Beckman DxI800
	ng/dl	0.443	0.332	0.554	0.06	0.11	
	pg/ml	4.44	3.33	5.55	0.56	1.11	Beckman DxI800
Free T4	pmol/l	18.5	13.9	23.1	2.30	4.60	Beckman DxI800
	ng/dl	1.44	1.08	1.80	0.18	0.36	
	pg/ml	14.4	10.8	18.0	1.80	3.60	Beckman DxI800
gamma-GT	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Oxygen electrode
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL PPD
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.30	1.11	1.49	0.10	0.19	HDL - Ultra
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.49	1.23	1.75	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.1	15.7	1.15	2.30	
LD (LDH)	U/l	167	142	192	12.50	25.00	L->P 37°C
	U/l	525	446	604	39.50	79.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.678	0.597	0.759	0.04	0.08	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Calmagite
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction CX4/5/7
	g/dl	5.79	4.63	6.95	0.58	1.16	
	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction kinetic
	g/dl	5.53	4.42	6.64	0.56	1.11	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.21	0.97	1.45	0.12	0.24	Beckman DxI800 Hyper TSH
Triglycerides	mmol/l	1.28	1.07	1.49	0.11	0.21	Lipase/GPO-PAP no correction
	mg/dl	113	94.7	131	9.15	18.30	
	mmol/l	1.29	1.08	1.50	0.11	0.21	L/G Kinase EP. no correction
	mg/dl	114	95.6	132	9.20	18.40	
Urea	mmol/l	7.90	6.71	9.09	0.60	1.19	Urease end point
	mg/dl	47.5	40.3	54.7	3.60	7.20	
	mmol/l	8.04	6.83	9.25	0.61	1.21	Urease kinetic
	mg/dl	48.3	41.0	55.6	3.65	7.30	
	mmol/l	8.04	6.83	9.25	0.61	1.21	BUN
	mg/dl	22.6	19.2	26.0	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	109	149	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	105	89	121	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Glucose	mmol/l	6.37	5.41	7.33	0.48	0.96	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct Clearance Method
	mg/dl	47.9	40.5	55.3	3.70	7.40	
Protein Total	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction end point
	g/dl	5.75	4.60	6.90	0.58	1.15	
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	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	125	106	144	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	102	87	117	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	22.8	18.0	27.6	2.40	4.80	Diazo with Sulphanilic Acid
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Bilirubin Total	µmol/l	32.9	26.0	39.8	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.92	1.52	2.32	0.20	0.40	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	4.25	3.70	4.80	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.49	5.52	7.46	0.49	0.97	Glucose oxidase
	mg/dl	117	99.5	135	8.75	17.50	
LD (LDH)	U/l	433	368	498	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	313	266	360	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	220	187	253	16.50	33.00	P->L Scandinavian & Dutch 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	
Protein Total	g/l	56.8	45.4	68.2	5.70	11.40	Biuret reaction end point
	g/dl	5.68	4.54	6.82	0.57	1.14	
Triglycerides	mmol/l	1.21	1.01	1.41	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.38	6.28	8.48	0.55	1.10	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.38	6.27	8.49	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.40	5.58	7.22	0.41	0.82	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.05	1.84	2.26	0.11	0.21	Arsenazo III
	mg/dl	8.22	7.37	9.07	0.43	0.85	
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Creatinine PAP method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Glucose	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	1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Protein Total	g/l	55.5	44.4	66.6	5.55	11.10	Biuret reaction end point
	g/dl	5.55	4.44	6.66	0.56	1.11	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.6	117	8.20	16.40	
Urea	mmol/l	7.83	6.66	9.00	0.59	1.17	Urease kinetic
	mg/dl	47.1	40.0	54.2	3.55	7.10	
	mmol/l	7.83	6.66	9.00	0.59	1.17	BUN
	mg/dl	22.0	18.7	25.3	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.03	5.26	6.80	0.39	0.77	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			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	39.7	33.8	45.6	2.95	5.90	Turbidimetric Assays
	g/dl	3.97	3.38	4.56	0.30	0.59	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	98	83	113	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.6	13.2	20.0	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	16.9	13.4	20.4	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.989	0.784	1.19	0.10	0.21	
	µmol/l	16.9	13.4	20.4	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.784	1.19	0.10	0.21	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	16.9	13.3	20.5	1.80	3.60	Roche JG factored
	mg/dl	0.989	0.778	1.20	0.11	0.21	
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Calcium	mmol/l	2.09	1.89	2.29	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.38	7.58	9.18	0.40	0.80	
	mmol/l	2.09	1.88	2.30	0.11	0.21	NM-BAPTA
	mg/dl	8.38	7.54	9.22	0.42	0.84	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	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	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	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	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.13	5.21	7.05	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.6	129	9.70	19.40	
	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	388	330	446	29.00	58.00	P->L German methods 37°C
	U/l	280	238	322	21.00	42.00	P->L German methods 30°C
	U/l	197	167	227	15.00	30.00	P->L German methods 25°C
	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.91	1.17	0.06	0.13	Ion selective electrode
	mg/dl	0.722	0.633	0.811	0.04	0.09	
Magnesium	mmol/l	0.98	0.86	1.10	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.38	2.09	2.67	0.15	0.29	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.1	44.0	66.2	5.55	11.10	Biuret reaction end point
	g/dl	5.51	4.40	6.62	0.56	1.11	
	g/l	56.8	45.4	68.2	5.70	11.40	Biuret reaction kinetic
	g/dl	5.68	4.54	6.82	0.57	1.14	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.7	33.7	51.7	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	239	188	290	25.50	51.00	
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	109	91.2	127	8.90	17.80	
	mmol/l	1.22	1.03	1.41	0.10	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	108	91.2	125	8.40	16.80	
	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	106	89.4	123	8.30	16.60	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.17	6.69	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	271	230	312	20.50	41.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
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	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
Glucose	mmol/l	6.62	5.62	7.62	0.50	1.00	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
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	
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Triglycerides	mmol/l	1.25	1.05	1.45	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	111	92.9	129	9.05	18.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.71	6.55	8.87	0.58	1.16	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.71	6.55	8.87	0.58	1.16	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	10.9	7.30	14.5	1.80	3.60	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Green
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	142	121	163	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	94	128	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	96	82	110	7.00	14.00	AMP optimised to IFCC 25°C
	U/l	175	149	201	13.00	26.00	Randox AMP 37°C
	U/l	136	116	156	10.00	20.00	Randox AMP 30°C
	U/l	112	95	129	8.50	17.00	Randox AMP 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	83	71	95	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	16.7	13.2	20.2	1.75	3.50	Enzymatic
Bile Acids	µmol/l	23.9	19.1	28.7	2.40	4.80	5th Generation Colorimetric
Bilirubin Total	µmol/l	24.8	19.6	30.0	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	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	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	NM-BAPTA
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	92.8	85.3	100	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	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	101	153	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.24	0.21	0.28	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 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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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	23	18	28	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.29	5.34	7.24	0.48	0.95	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL Roche 3rd generation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P IFCC 37°C
	U/l	147	124	170	11.50	23.00	L->P IFCC 30°C
	U/l	103	87	119	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.2	33.3	51.1	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	236	186	286	25.00	50.00	
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	108	90.3	126	8.85	17.70	
Urea	mmol/l	8.13	6.91	9.35	0.61	1.22	Urease kinetic
	mg/dl	48.9	41.5	56.3	3.70	7.40	
	mmol/l	8.13	6.91	9.35	0.61	1.22	BUN
	mg/dl	22.8	19.4	26.2	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	183	155	211	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	121	165	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	117	99	135	9.00	18.00	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	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	192	158	226	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	99	141	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	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	1.17	0.99	1.35	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.2	38.3	52.1	3.45	6.90	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.05	3.72	4.38	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	
Triglycerides	mmol/l	1.21	1.01	1.41	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	8.14	6.92	9.36	0.61	1.22	Urease end point
	mg/dl	48.9	41.6	56.2	3.65	7.30	
	mmol/l	8.14	6.92	9.36	0.61	1.22	BUN
	mg/dl	22.8	19.4	26.2	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	274	233	315	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	213	182	244	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	175	149	201	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	170	145	195	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	113	151	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	45	36	54	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	15.4	12.2	18.6	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	22.3	17.6	27.0	2.35	4.70	Nitrobenzenediazonium salt
	mg/dl	1.30	1.03	1.57	0.14	0.27	
Calcium	mmol/l	2.07	1.87	2.27	0.10	0.20	Arsenazo III
	mg/dl	8.30	7.49	9.11	0.41	0.81	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	ISE direct

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	212	173	251	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	133	108	158	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
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	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL PEGME
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	22.2	18.2	26.2	2.00	4.00	Colorimetric without ppt.
	µg/dl	124	102	146	11.00	22.00	
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	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - direct
Protein Total	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction end point
	g/dl	5.76	4.61	6.91	0.58	1.15	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
Urea	mmol/l	7.86	6.68	9.04	0.59	1.18	Urease kinetic
	mg/dl	47.2	40.1	54.3	3.55	7.10	
	mmol/l	7.86	6.68	9.04	0.59	1.18	BUN
	mg/dl	22.1	18.8	25.4	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.14	6.66	0.38	0.76	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	213	169	257	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	161	128	194	16.50	33.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	121	96	146	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.9	7.30	14.5	1.80	3.60	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Green
	g/dl	4.11	3.50	4.72	0.31	0.61	
	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Purple
	g/dl	4.22	3.58	4.86	0.32	0.64	
	g/l	39.4	33.5	45.3	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.94	3.35	4.53	0.30	0.59	
	g/l	40.1	34.1	46.1	3.00	6.00	Turbidimetric Assays
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	273	232	314	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	213	181	245	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	174	148	200	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	171	146	196	12.50	25.00	AMP non-optimised 37°C
	U/l	133	114	152	9.50	19.00	AMP non-optimised 30°C
	U/l	109	93	125	8.00	16.00	AMP non-optimised 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	36	52	4.00	8.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer SCE 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer SCE 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	63	53	73	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	63	54	72	4.50	9.00	Roche EPS Liquid 37°C
	U/l	71	60	82	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	83	70	96	6.50	13.00	Saccharogenic 37°C
	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	84	72	96	6.00	12.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	87	74	100	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	85	72	98	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	101	86	116	7.50	15.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	0.95	0.78	1.12	0.09	0.17	Immunoturbidimetric
	mg/dl	95.1	78.0	112	8.55	17.10	
Apolipoprotein B	g/l	0.59	0.48	0.69	0.05	0.11	Immunoturbidimetric
	mg/dl	58.5	48.0	69.0	5.25	10.50	
AST (GOT)	U/l	56	45	67	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	56	45	67	5.50	11.00	Tris buffer with P5P 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 30°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 25°C
	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
	U/l	38	31	45	3.50	7.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	16.6	13.2	20.0	1.70	3.40	Colorimetric
	mmol/l	18.0	14.3	21.7	1.85	3.70	Ortho Vitros Microslide Systems
	mmol/l	16.2	12.9	19.5	1.65	3.30	Differential rate pH change
	mmol/l	16.7	13.2	20.2	1.75	3.50	Enzymatic
	mmol/l	16.7	13.2	20.2	1.75	3.50	Ion selective electrode
Bile Acids	µmol/l	26.5	21.2	31.8	2.65	5.30	4th Generation Colorimetric

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	23.9	19.1	28.7	2.40	4.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.8	14.1	21.5	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.825	1.26	0.11	0.22	
	µmol/l	12.0	9.48	14.5	1.26	2.52	Vitros conjugated from BUBC
	mg/dl	0.702	0.555	0.849	0.07	0.15	
	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.20	0.948	1.45	0.13	0.25	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	15.1	11.9	18.3	1.60	3.20	Oxidation to Biliverdin/Vanadate
	mg/dl	0.883	0.696	1.07	0.09	0.19	
	µmol/l	16.6	13.1	20.1	1.75	3.50	Modified Jendrassik
	mg/dl	0.971	0.766	1.18	0.10	0.21	
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	34.0	26.9	41.1	3.55	7.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.99	1.57	2.41	0.21	0.42	
	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	22.3	17.6	27.0	2.35	4.70	Nitrobenzenediazonium salt
	mg/dl	1.30	1.03	1.57	0.14	0.27	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	33.8	26.7	40.9	3.55	7.10	Modified Jendrassik
	mg/dl	1.98	1.56	2.40	0.21	0.42	
Calcium	mmol/l	2.09	1.89	2.29	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.38	7.58	9.18	0.40	0.80	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.07	1.87	2.27	0.10	0.20	Ion selective electrode
	mg/dl	8.30	7.49	9.11	0.41	0.81	
	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
	mmol/l	2.10	1.89	2.31	0.11	0.21	NM-BAPTA
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Chloride	mmol/l	100	92.0	108	4.00	8.00	Colorimetric
	mmol/l	96.3	88.6	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.8	87.3	102	3.75	7.50	ISE indirect
	mmol/l	96.5	88.8	104	3.85	7.70	ISE direct
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	130	168	9.50	19.00	
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	5643	4514	6772	564.50	1129.00	Colorimetric Butyrylthiocholine 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	197	161	233	18.00	36.00	Ortho Vitros Microslide Systems 37°C
	U/l	207	169	245	19.00	38.00	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	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	220	181	259	19.50	39.00	Monothioglycerol 37°C
	U/l	138	113	163	12.50	25.00	Monothioglycerol 30°C
	U/l	94	77	111	8.50	17.00	Monothioglycerol 25°C
	U/l	196	161	231	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	123	101	145	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	83	68	98	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	17.7	14.2	21.2	1.75	3.50	Atomic absorption
	µg/dl	113	90.3	136	11.35	22.70	
	µmol/l	17.9	14.3	21.5	1.80	3.60	Colorimetric
	µg/dl	114	90.9	137	11.55	23.10	
Cortisol	nmol/l	459	344	574	57.50	115.00	Roche Cobas E411
	µg/dl	16.5	12.4	20.6	2.05	4.10	
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Alkaline picrate with deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	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	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	132	105	159	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.49	1.19	1.79	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	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	
	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	
	µmol/l	122	97.6	146	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.10	1.68	2.52	0.21	0.42	Immunoturbidimetric
	ng/ml	1.64	1.31	1.97	0.17	0.33	
Folate	nmol/l	16.6	12.6	20.6	2.00	4.00	Roche Cobas E411
	ng/ml	7.32	5.56	9.08	0.88	1.76	
Free T4	pmol/l	16.8	12.6	21.0	2.10	4.20	Abbott Architect
	ng/dl	1.31	0.983	1.64	0.16	0.33	
	pg/ml	13.1	9.83	16.4	1.64	3.27	Abbott Architect
	pmol/l	19.3	14.5	24.1	2.40	4.80	Siemens Centaur XP/XPT/Classic
	ng/dl	1.51	1.13	1.89	0.19	0.38	
	pg/ml	15.1	11.3	18.9	1.90	3.80	Siemens Centaur XP/XPT/Classic

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	19.2	14.4	24.0	2.40	4.80	Beckman Access
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Beckman Access
	pmol/l	18.5	13.9	23.1	2.30	4.60	Beckman DxI800
	ng/dl	1.44	1.08	1.80	0.18	0.36	
	pg/ml	14.4	10.8	18.0	1.80	3.60	Beckman DxI800
	pmol/l	33.8	25.3	42.3	4.25	8.50	Vitros ECi
	ng/dl	2.64	1.97	3.31	0.34	0.67	
	pg/ml	26.4	19.7	33.1	3.35	6.70	Vitros ECi
	pmol/l	22.1	16.6	27.6	2.75	5.50	Roche Modular E170
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Modular E170
	pmol/l	22.2	16.6	27.8	2.80	5.60	Roche Cobas E411
	ng/dl	1.73	1.29	2.17	0.22	0.44	
	pg/ml	17.3	12.9	21.7	2.20	4.40	Roche Cobas E411
	pmol/l	22.1	16.6	27.6	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Cobas 6000/8000
	pmol/l	20.4	15.3	25.5	2.55	5.10	Biomerieux Vidas FT4N Kit
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.72	6.18	9.26	0.77	1.54	Immunoturbidimetric
	µg/ml	3.69	2.95	4.43	0.37	0.74	
	µmol/l	7.11	5.69	8.53	0.71	1.42	Gravimetric
	µg/ml	3.40	2.72	4.08	0.34	0.68	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	22	32	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	6.23	5.29	7.17	0.47	0.94	Glucose dehydrogenase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Oxygen electrode
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.37	5.41	7.33	0.48	0.96	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.22	1.04	1.40	0.09	0.18	Vitros Magnetic HDL
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL PEGME
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct Clearance Method
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL Roche 3rd generation
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.28	1.09	1.47	0.10	0.19	HDL - Ultra
	mg/dl	49.4	42.1	56.7	3.65	7.30	
Immunoglobulin A	g/l	1.83	1.37	2.29	0.23	0.46	Immunoturbidimetric
	mg/dl	183	137	229	23.00	46.00	
Immunoglobulin G	g/l	7.59	6.22	8.96	0.69	1.37	Immunoturbidimetric
	mg/dl	759	622	896	68.50	137.00	
Immunoglobulin M	g/l	0.79	0.63	0.94	0.08	0.16	Immunoturbidimetric
	mg/dl	78.7	63.0	94.4	7.85	15.70	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	90.6	131	10.20	20.40	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
	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	1.47	1.20	1.74	0.14	0.27	Ion selective electrode
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
	mmol/l	1.46	1.19	1.73	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.7	15.7	1.25	2.50	
	mmol/l	1.57	1.29	1.85	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.6	16.6	1.25	2.50	
	mmol/l	1.40	1.15	1.65	0.13	0.25	UV LDH
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LAP	U/l	16	14	18	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	533	453	613	40.00	80.00	Ortho Vitros Microslide Systems 37°C
	U/l	181	154	208	13.50	27.00	L->P 37°C
	U/l	131	111	151	10.00	20.00	L->P 30°C
	U/l	92	78	106	7.00	14.00	L->P 25°C
	U/l	436	370	502	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	315	267	363	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	221	188	254	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	395	335	455	30.00	60.00	P->L German methods 37°C
	U/l	285	242	328	21.50	43.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	403	342	464	30.50	61.00	P->L SFBC 37°C
	U/l	291	247	335	22.00	44.00	P->L SFBC 30°C
	U/l	204	173	235	15.50	31.00	P->L SFBC 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
	U/l	171	137	205	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
	U/l	124	100	148	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.17	1.03	1.31	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.812	0.715	0.909	0.05	0.10	
	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.619	0.783	0.04	0.08	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.629	0.801	0.04	0.09	
	mmol/l	1.09	0.96	1.22	0.07	0.13	Randox Colorimetric
	mg/dl	0.757	0.666	0.848	0.05	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Arsenazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.95	0.84	1.07	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.31	2.03	2.59	0.14	0.28	
	mmol/l	0.94	0.83	1.06	0.06	0.11	Calmagite
	mg/dl	2.29	2.02	2.56	0.14	0.27	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.94	0.82	1.05	0.06	0.11	Methylthymol blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
	mmol/l	0.97	0.85	1.09	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.36	2.07	2.65	0.15	0.29	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
NEFA	mmol/l	1.27	1.08	1.46	0.10	0.19	Colorimetric
Osmolality	mOsm/kg	295	236	354	29.50	59.00	Calculated
	mOsm/kg	308	247	369	30.50	61.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.10	0.01	0.02	Colorimetric
	mg/l	12.0	9.53	14.5	1.24	2.47	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.04	3.72	4.36	0.16	0.32	Enzymatic
	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - direct
	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction CX4/5/7
	g/dl	5.67	4.54	6.80	0.57	1.13	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
	g/l	56.7	45.3	68.1	5.70	11.40	Biuret reaction kinetic
	g/dl	5.67	4.53	6.81	0.57	1.14	
PSA Total	ng/ml =	12.9	9.70	16.1	1.60	3.20	Roche Elecsys Modular E170
	ng/ml =	12.7	9.55	15.9	1.58	3.15	Beckman Access standardised to Hybritech
	ng/ml =	12.8	9.60	16.0	1.60	3.20	bioMerieux VIDAS TPSA
	ng/ml =	11.0	8.26	13.7	1.37	2.74	Abbott Architect
	ng/ml =	12.9	9.68	16.1	1.61	3.22	Cobas E411
	ng/ml =	13.0	9.73	16.3	1.64	3.27	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	145	137	153	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	146	139	153	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	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.11	0.23	Abbott Architect
	µU/ml =	1.22	0.98	1.46	0.12	0.24	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Vitros ECi
	µU/ml =	1.47	1.18	1.76	0.15	0.29	Roche Elecsys
	µU/ml =	1.47	1.17	1.77	0.15	0.30	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.49	1.19	1.79	0.15	0.30	Roche Cobas 6000/8000
	µU/ml =	1.21	0.97	1.45	0.12	0.24	Beckman DxI800 Hyper TSH
	µU/ml =	1.23	0.99	1.47	0.12	0.24	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	51.3	40.5	62.1	5.40	10.80	Ortho Vitros Microslide Systems
	µg/dl	287	226	348	30.50	61.00	
	µmol/l	43.1	34.1	52.1	4.50	9.00	Removal of excess free iron
	µg/dl	241	191	291	25.00	50.00	
	µmol/l	43.0	33.9	52.1	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	240	190	290	25.00	50.00	
	µmol/l	47.0	37.1	56.9	4.95	9.90	Direct Colorimetric
	µg/dl	263	207	319	28.00	56.00	
	µmol/l	44.2	34.9	53.5	4.65	9.30	Calculated from Transferrin
	µg/dl	247	195	299	26.00	52.00	
	µmol/l	50.4	39.8	61.0	5.30	10.60	Randox Direct
	µg/dl	282	222	342	30.00	60.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	2.49	1.87	3.11	0.31	0.62	Abbott Architect
	ng/ml	1.62	1.22	2.02	0.20	0.40	
	ng/dl	162	122	202	20.00	40.00	Abbott Architect
	nmol/l	2.88	2.16	3.60	0.36	0.72	Siemens Centaur XP/XPT/Classic
	ng/ml	1.87	1.41	2.33	0.23	0.46	
	ng/dl	187	141	233	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.80	2.10	3.50	0.35	0.70	Roche Cobas E411
	ng/ml	1.82	1.37	2.27	0.23	0.45	
	ng/dl	182	137	227	22.50	45.00	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	91.0	68.2	114	11.40	22.80	Abbott Architect
	µg/dl	7.10	5.32	8.88	0.89	1.78	
	ng/ml	71.0	53.2	88.8	8.90	17.80	Abbott Architect
	nmol/l	88.3	66.2	110	11.05	22.10	Siemens Centaur XP/XPT/Classic
	µg/dl	6.89	5.16	8.62	0.87	1.73	
	ng/ml	68.9	51.6	86.2	8.65	17.30	Siemens Centaur XP/XPT/Classic
	nmol/l	93.7	70.3	117	11.70	23.40	Roche Modular E170
	µg/dl	7.31	5.48	9.14	0.92	1.83	
	ng/ml	73.1	54.8	91.4	9.15	18.30	Roche Modular E170
	nmol/l	96.3	72.3	120	12.00	24.00	Roche Cobas E411
	µg/dl	7.51	5.64	9.38	0.94	1.87	
	ng/ml	75.1	56.4	93.8	9.35	18.70	Roche Cobas E411
	nmol/l	88.5	66.4	111	11.05	22.10	Roche Cobas 6000/8000
	µg/dl	6.90	5.18	8.62	0.86	1.72	
	ng/ml	69.0	51.8	86.2	8.60	17.20	Roche Cobas 6000/8000
Transferrin	g/l	1.95	1.56	2.34	0.20	0.39	Immunoturbidimetric
	mg/dl	195	156	234	19.50	39.00	
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
	mmol/l	1.22	1.03	1.41	0.10	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	108	91.2	125	8.40	16.80	
	mmol/l	1.22	1.03	1.41	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	108	91.2	125	8.40	16.80	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	102	85.3	119	8.35	16.70	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.38	1.16	1.60	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	122	103	141	9.50	19.00	
UIBC	µmol/l	22.5	18.5	26.5	2.00	4.00	Direct Colorimetric
	µg/dl	126	103	149	11.50	23.00	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Ortho Vitros Microslide Systems
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.80	6.63	8.97	0.59	1.17	Urease end point
	mg/dl	46.9	39.8	54.0	3.55	7.10	
	mmol/l	7.72	6.56	8.88	0.58	1.16	Urease kinetic
	mg/dl	46.4	39.4	53.4	3.50	7.00	
	mmol/l	7.72	6.56	8.88	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Vitamin B12	pmol/l	367	294	440	36.50	73.00	Roche Cobas E411
	pg/ml	497	398	596	49.50	99.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Zinc	µmol/l	22.6	18.1	27.1	2.25	4.50	Colorimetric with deproteinisation
	µg/dl	148	118	178	15.00	30.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		67.9	61.2	74.6	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.6	4.3	6.9	0.67	1.34	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
beta-globulin		9.3	7.1	11.5	1.12	2.23	% of total Protein (Beckman Capillary)
gamma-globulin		10.9	8.3	13.5	1.31	2.62	% 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. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			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	
Alkaline Phosphatase	U/l	255	216	294	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	199	168	230	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	163	138	188	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
Cholinesterase	U/l	5191	4153	6229	519.00	1038.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
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	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	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.58	5.59	7.57	0.50	0.99	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct Clearance Method
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	402	342	462	30.00	60.00	P->L German methods 37°C
	U/l	290	247	333	21.50	43.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	408	347	469	30.50	61.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.95	0.84	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
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	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	88.0	120	8.00	16.00	
Urea	mmol/l	7.90	6.71	9.09	0.60	1.19	Urease kinetic
	mg/dl	47.5	40.3	54.7	3.60	7.20	
	mmol/l	7.90	6.72	9.08	0.59	1.18	BUN
	mg/dl	22.2	18.9	25.5	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.25	5.43	7.07	0.41	0.82	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.4	33.5	45.3	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.94	3.35	4.53	0.30	0.59	
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	56	45	67	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Bicarbonate	mmol/l	18.0	14.3	21.7	1.85	3.70	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Bilirubin, Unconjugated Vitros BU	µmol/l	11.6	9.16	14.0	1.22	2.44	BuBc Vitros Slide
	mg/dl	0.679	0.536	0.822	0.07	0.14	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	130	168	9.50	19.00	
Cholinesterase	U/l	5603	4482	6724	560.50	1121.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	197	161	233	18.00	36.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	122	97.6	146	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	33.8	25.3	42.3	4.25	8.50	Vitros ECi
	ng/dl	2.64	1.97	3.31	0.34	0.67	
	pg/ml	26.4	19.7	33.1	3.35	6.70	Vitros ECi
gamma-GT	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Vitros Magnetic HDL
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
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	1.46	1.19	1.73	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.7	15.7	1.25	2.50	
LD (LDH)	U/l	533	453	613	40.00	80.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	171	137	205	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.17	1.03	1.31	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.812	0.715	0.909	0.05	0.10	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.81	4.65	6.97	0.58	1.16	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	145	137	153	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.26	1.01	1.51	0.13	0.25	Vitros ECi
Triglycerides	mmol/l	1.38	1.16	1.60	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	122	103	141	9.50	19.00	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Ortho Vitros Microslide Systems
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.92	6.36	0.36	0.72	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Cholesterol	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	213	174	252	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	91	74	108	8.50	17.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.9	121	8.55	17.10	
Urea	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Purple
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	41.2	35.0	47.4	3.10	6.20	Turbidimetric Assays
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	63	53	73	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	81	69	93	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	84	72	96	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	84	72	96	6.00	12.00	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	16.4	13.0	19.8	1.70	3.40	Colorimetric
	mmol/l	16.6	13.2	20.0	1.70	3.40	Enzymatic

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	
Bile Acids	µmol/l	25.8	20.7	30.9	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.4	13.8	21.0	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.3	13.6	21.0	1.85	3.70	Roche JG factored
	mg/dl	1.01	0.796	1.22	0.11	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	25.0	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	25.0	19.7	30.3	2.65	5.30	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
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	2.11	1.90	2.32	0.11	0.21	NM-BAPTA
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	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	
Cholinesterase	U/l	5422	4337	6507	542.50	1085.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			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	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.49	1.19	1.79	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	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	22.1	16.6	27.6	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Cobas 6000/8000
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.1	129	8.45	16.90	
	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	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL Roche 3rd generation
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.0	130	10.00	20.00	
	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	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	398	338	458	30.00	60.00	P->L German methods 37°C
	U/l	287	244	330	21.50	43.00	P->L German methods 30°C
	U/l	202	171	233	15.50	31.00	P->L German methods 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche 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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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.96	0.84	1.07	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.33	2.05	2.61	0.14	0.28	
Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
	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	
PSA Total	ng/ml =	13.0	9.73	16.3	1.64	3.27	Roche Cobas 6000/8000
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.49	1.19	1.79	0.15	0.30	Roche Cobas 6000/8000
TIBC	µmol/l	41.5	32.8	50.2	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	232	183	281	24.50	49.00	
	µmol/l	45.3	35.8	54.8	4.75	9.50	Calculated from Transferrin
	µg/dl	253	200	306	26.50	53.00	
Total T3	nmol/l	2.80	2.10	3.50	0.35	0.70	Roche Cobas 6000/8000
	ng/ml	1.82	1.37	2.27	0.23	0.45	
	ng/dl	182	137	227	22.50	45.00	Roche Cobas 6000/8000

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	88.5	66.4	111	11.05	22.10	Roche Cobas 6000/8000
	µg/dl	6.90	5.18	8.62	0.86	1.72	
	ng/ml	69.0	51.8	86.2	8.60	17.20	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	108	90.3	126	8.85	17.70	
	mmol/l	1.22	1.02	1.42	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	108	90.3	126	8.85	17.70	
UIBC	µmol/l	21.7	17.8	25.6	1.95	3.90	Direct Colorimetric
	µg/dl	121	99.5	143	10.75	21.50	
Urea	mmol/l	7.68	6.53	8.83	0.58	1.15	Urease end point
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	mmol/l	7.65	6.50	8.80	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.01	6.51	0.38	0.75	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	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	
	µmol/l	16.1	12.7	19.5	1.70	3.40	Roche JG factored
	mg/dl	0.942	0.743	1.14	0.10	0.20	
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	

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Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.3	19.2	29.4	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	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	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	NM-BAPTA
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	98.1	90.3	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
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	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	119	94.9	143	12.05	24.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.07	1.61	0.14	0.27	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.35	1.14	1.56	0.11	0.21	
	mg/dl	52.1	44.0	60.2	4.05	8.10	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.35	2.07	2.63	0.14	0.28	
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	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction end point
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	110	92.0	128	9.00	18.00	
Urea	mmol/l	7.52	6.39	8.65	0.57	1.13	Urease kinetic
	mg/dl	45.2	38.4	52.0	3.40	6.80	
	mmol/l	7.52	6.39	8.65	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
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	5.68	4.94	6.42	0.37	0.74	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	145	124	166	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	113	97	129	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	65	56	74	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	73	97	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	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	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Roche JG factored
	mg/dl	1.05	0.831	1.27	0.11	0.22	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.1	19.9	30.3	2.60	5.20	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	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
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	2.12	1.90	2.34	0.11	0.22	NM-BAPTA
	mg/dl	8.50	7.62	9.38	0.44	0.88	
Chloride	mmol/l	91.4	84.1	98.7	3.65	7.30	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	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	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	
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. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct HDL Roche 3rd generation
	mg/dl	45.5	38.6	52.4	3.45	6.90	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	396	337	455	29.50	59.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	206	176	236	15.00	30.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	28	22	34	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.33	2.05	2.61	0.14	0.28	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
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	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.6	32.9	50.3	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	233	184	282	24.50	49.00	
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	109	91.2	127	8.90	17.80	
	mmol/l	1.23	1.03	1.43	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	109	91.2	127	8.90	17.80	
Urea	mmol/l	7.82	6.65	8.99	0.59	1.17	Urease kinetic
	mg/dl	47.0	40.0	54.0	3.50	7.00	
	mmol/l	7.82	6.65	8.99	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.06	6.54	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.09	6.63	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Green
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	143	121	165	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	94	128	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	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
Amylase Pancreatic	U/l	62	53	71	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.1	13.5	20.7	1.80	3.60	Enzymatic
Bile Acids	µmol/l	25.3	20.2	30.4	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Roche JG factored
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	14.8	11.7	17.9	1.55	3.10	Oxidation to Biliverdin/Vanadate
	mg/dl	0.866	0.684	1.05	0.09	0.18	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
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	
	mmol/l	2.09	1.88	2.30	0.11	0.21	NM-BAPTA
	mg/dl	8.38	7.54	9.22	0.42	0.84	
Chloride	mmol/l	91.8	84.4	99.2	3.70	7.40	ISE indirect
Cholesterol	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5557	4445	6669	556.00	1112.00	Colorimetric Butyrylthiocholine 37°C
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	134	108	160	13.00	26.00	Enzymatic UV method
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.55	1.24	1.86	0.16	0.31	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.11	0.95	1.28	0.08	0.17	Direct HDL Roche 3rd generation
	mg/dl	42.8	36.5	49.1	3.15	6.30	
Iron	µmol/l	19.0	15.5	22.5	1.75	3.50	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.51	1.23	1.79	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.1	16.1	1.25	2.50	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.629	0.801	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	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.6	33.7	51.5	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.21	1.01	1.41	0.10	0.20	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	107	89.4	125	8.80	17.60	
UIBC	µmol/l	23.5	19.2	27.8	2.15	4.30	Direct Colorimetric
	µg/dl	131	107	155	12.00	24.00	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.30	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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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	302	257	347	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	µmol/l	15.5	12.2	18.8	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.907	0.714	1.10	0.10	0.19	
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	26.9	21.3	32.5	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.57	1.25	1.89	0.16	0.32	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Chloride	mmol/l	96.9	89.1	105	3.90	7.80	ISE direct
Cholesterol	mmol/l	4.34	3.78	4.90	0.28	0.56	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	

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RANDOX

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	230	189	271	20.50	41.00	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	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.53	5.55	7.51	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	37	30	44	3.50	7.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.07	0.13	Colorimetric
	mg/dl	0.757	0.666	0.848	0.05	0.09	
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.35	2.07	2.63	0.14	0.28	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	Enzymatic
	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - direct
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	146	139	153	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
TIBC	µmol/l	50.4	39.8	61.0	5.30	10.60	Direct Colorimetric
	µg/dl	282	222	342	30.00	60.00	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.2	122	8.40	16.80	
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.70	6.55	8.85	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	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	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

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

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	39.7	33.8	45.6	2.95	5.90	Bromocresol Green
	g/dl	3.97	3.38	4.56	0.30	0.59	
	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Purple
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	154	131	177	11.50	23.00	AMP non-optimised 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	62	52	72	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Enzymatic
Bile Acids	µmol/l	26.9	21.5	32.3	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	15.0	11.8	18.2	1.60	3.20	Oxidation to Biliverdin/Vanadate
	mg/dl	0.878	0.690	1.07	0.09	0.19	
Bilirubin Total	µmol/l	28.4	22.4	34.4	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.04	1.83	2.25	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.18	7.33	9.03	0.43	0.85	
	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	96.7	89.0	104	3.85	7.70	ISE indirect

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

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.12	5.21	7.03	0.46	0.91	Hexokinase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.09	0.93	1.25	0.08	0.16	Direct Clearance Method
	mg/dl	42.1	35.9	48.3	3.10	6.20	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	398	338	458	30.00	60.00	P->L German methods 37°C
	U/l	203	172	234	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.615	0.787	0.04	0.09	

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

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	49.3	39.0	59.6	5.15	10.30	Direct Colorimetric
	µg/dl	276	218	334	29.00	58.00	
Triglycerides	mmol/l	1.25	1.05	1.45	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	111	92.9	129	9.05	18.10	
Urea	mmol/l	7.93	6.74	9.12	0.60	1.19	Urease kinetic
	mg/dl	47.7	40.5	54.9	3.60	7.20	
	mmol/l	7.93	6.74	9.12	0.60	1.19	BUN
	mg/dl	22.3	19.0	25.6	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	49	40	58	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	56	45	67	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.8	14.9	22.7	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	11.5	9.05	14.0	1.23	2.45	Diazo with Sulphanilic Acid
	mg/dl	0.673	0.529	0.817	0.07	0.14	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
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	96.6	88.9	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.57	3.11	4.03	0.23	0.46	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	66	56	76	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PEGME
	mg/dl	47.9	40.5	55.3	3.70	7.40	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	UV LDH
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	194	165	223	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	196	166	226	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	124	100	148	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Methylthymol blue
	mg/dl	2.28	2.00	2.56	0.14	0.28	
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	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.1	32.5	49.7	4.30	8.60	Removal of excess free iron
	µg/dl	230	182	278	24.00	48.00	
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	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.5	118	8.25	16.50	
Urea	mmol/l	7.82	6.65	8.99	0.59	1.17	Urease kinetic
	mg/dl	47.0	40.0	54.0	3.50	7.00	
	mmol/l	7.82	6.65	8.99	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Purple
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	157	134	180	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	54	43	65	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	11.5	9.08	13.9	1.21	2.42	Diazo with Sulphanilic Acid
	mg/dl	0.673	0.531	0.815	0.07	0.14	
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
Calcium	mmol/l	2.03	1.82	2.24	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.14	7.29	8.99	0.43	0.85	
Chloride	mmol/l	98.0	90.1	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.57	3.11	4.03	0.23	0.46	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°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	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
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	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL PPD
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
LD (LDH)	U/l	198	168	228	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	123	99	147	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.46	3.81	5.11	0.33	0.65	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect

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RANDOX

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1284UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-02-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.2	116	7.90	15.80	
	mmol/l	1.14	0.95	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.3	118	8.35	16.70	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	103	85.9	120	8.55	17.10	
Urea	mmol/l	7.79	6.62	8.96	0.59	1.17	Urease end point
	mg/dl	46.8	39.8	53.8	3.50	7.00	
	mmol/l	7.91	6.72	9.10	0.60	1.19	Urease kinetic
	mg/dl	47.5	40.4	54.6	3.55	7.10	
	mmol/l	7.91	6.72	9.10	0.60	1.19	BUN
	mg/dl	22.2	18.9	25.5	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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