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. 1586UN **EXPIRY:** 2025-12-28

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

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

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

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

Health and Safety Data Sheets are available on request.

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

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

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

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
Due to the variation caused by test equipment, test reagents and laboratory technique, the quoted ranges are provided for guidance. It is recommended that these ranges are used until each laboratory has established its own ranges, based on individual laboratory requirements.

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.

If an instrument specific value is not available, refer to the Method 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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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	41.9	35.7	48.1	3.10	6.20	Bromocresol Purple
	g/dl	4.19	3.57	4.81	0.31	0.62	
	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	39.6	33.6	45.6	3.00	6.00	Turbidimetric Assays
	g/dl	3.96	3.36	4.56	0.30	0.60	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Ortho Vitros Microslide Systems 37°C
	U/l	278	236	320	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	217	184	250	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	178	151	205	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	172	146	198	13.00	26.00	AMP non-optimised 37°C
	U/l	134	114	154	10.00	20.00	AMP non-optimised 30°C
	U/l	110	93	127	8.50	17.00	AMP non-optimised 25°C
	U/l	167	142	192	12.50	25.00	Colorimetric 37°C
	U/l	130	111	149	9.50	19.00	Colorimetric 30°C
	U/l	107	91	123	8.00	16.00	Colorimetric 25°C

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ALT (GPT)	U/l	36	29	43	3.50	7.00	Ortho Vitros Microslide Systems 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer with P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer with P5P 25°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	61	52	70	4.50	9.00	Roche EPS Liquid 37°C
	U/l	73	62	84	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	83	71	95	6.00	12.00	pNP Maltotrioside substrates 37°C
	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	69	59	79	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	83	71	95	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	84	72	96	6.00	12.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	87	74	100	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	77	65	89	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Apolipoprotein A-1	g/l	1.21	0.99	1.43	0.11	0.22	Immunoturbidimetric
	mg/dl	121	99.2	143	10.90	21.80	
Apolipoprotein B	g/l	0.67	0.55	0.79	0.06	0.12	Immunoturbidimetric
	mg/dl	66.7	54.7	78.7	6.00	12.00	
Acid Phosphatase (Total)	U/l	18.2	12.2	24.2	3.00	6.00	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	28	40	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer with P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.8	19.8	29.8	2.50	5.00	4th Generation Colorimetric
	µmol/l	25.0	20.0	30.0	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Colorimetric
	mmol/l	16.8	13.3	20.3	1.75	3.50	Ortho Vitros Microslide Systems
	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	23.8	18.8	28.8	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
	µmol/l	23.5	18.6	28.4	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.25	0.989	1.51	0.13	0.26	

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METHOD

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Modified Jendrassik
	mg/dl	1.22	0.965	1.48	0.13	0.26	
Bilirubin Total	µmol/l	28.4	22.5	34.3	2.95	5.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.66	1.32	2.00	0.17	0.34	
	µmol/l	31.7	25.0	38.4	3.35	6.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	32.5	25.7	39.3	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazonium ion
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	35.5	28.1	42.9	3.70	7.40	Oxidation to Biliverdin/Vanadate
	mg/dl	2.08	1.64	2.52	0.22	0.44	
	µmol/l	41.2	32.5	49.9	4.35	8.70	Modified Jendrassik
	mg/dl	2.41	1.90	2.92	0.26	0.51	
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	2.07	1.86	2.28	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	8.30	7.45	9.15	0.43	0.85	
	mmol/l	2.05	1.85	2.25	0.10	0.20	Ion selective electrode
	mg/dl	8.22	7.41	9.03	0.41	0.81	
	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	
	mmol/l	2.08	1.87	2.29	0.11	0.21	NM-BAPTA
	mg/dl	8.34	7.49	9.19	0.43	0.85	

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	0.75	0.68	0.83	0.04	0.08	Ionised calcium
	mg/dl	3.01	2.71	3.31	0.15	0.30	
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Dehydrogenase
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	Ortho Vitros Microslide Systems
	mmol/l	92.4	85.0	99.8	3.70	7.40	ISE indirect
	mmol/l	94.3	86.7	102	3.80	7.60	ISE direct
Cholinesterase	U/l	6137	4910	7364	613.50	1227.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	175	143	207	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	190	155	225	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	119	97	141	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	195	160	230	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Copper	µmol/l	16.7	13.3	20.1	1.70	3.40	Atomic absorption
	µg/dl	106	84.6	127	10.70	21.40	
	µmol/l	16.9	13.5	20.3	1.70	3.40	Colorimetric
	µg/dl	107	85.9	128	10.55	21.10	
Cortisol	nmol/l	478	359	597	59.50	119.00	Roche Cobas e402/e801
	µg/dl	17.2	12.9	21.5	2.15	4.30	
Creatinine	µmol/l	129	104	154	12.50	25.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	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	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5

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Digoxin	nmol/l	2.01	1.61	2.41	0.20	0.40	Immunoturbidimetric
	ng/ml	1.57	1.26	1.88	0.16	0.31	
Folate	nmol/l	22.1	16.8	27.4	2.65	5.30	Roche Cobas e402/e801
	ng/ml	9.75	7.41	12.1	1.17	2.34	
Free T4	pmol/l	16.1	12.1	20.1	2.00	4.00	Abbott Architect
	ng/dl	1.26	0.944	1.58	0.16	0.32	
	pg/ml	12.6	9.44	15.8	1.58	3.16	Abbott Architect
	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 4000/E411
	ng/dl	1.64	1.23	2.05	0.21	0.41	
	pg/ml	16.4	12.3	20.5	2.05	4.10	Roche Cobas 4000/E411
	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Cobas e601/602
	ng/dl	1.65	1.23	2.07	0.21	0.42	
	pg/ml	16.5	12.3	20.7	2.10	4.20	Roche Cobas e601/602
	pmol/l	18.9	14.1	23.7	2.40	4.80	Biomerieux Vidas FT4N Kit
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Biomerieux Vidas FT4N Kit
	pmol/l	20.5	15.4	25.6	2.55	5.10	Roche Cobas e402/e801
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Roche Cobas e402/e801
	pmol/l	18.7	14.0	23.4	2.35	4.70	Siemens Centaur XP/XPT/Classic
	ng/dl	1.46	1.09	1.83	0.19	0.37	Siemens Centaur XP/XPT/Classic
	pg/ml	14.6	10.9	18.3	1.85	3.70	Siemens Centaur XP/XPT/Classic
	pmol/l	17.1	12.8	21.4	2.15	4.30	Beckman Access
	ng/dl	1.33	0.998	1.66	0.17	0.33	Beckman Access
	pg/ml	13.3	9.98	16.6	1.66	3.32	Beckman Access

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Gentamicin	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	
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	59	50	68	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	52	44	60	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Ortho Vitros Microslide Systems
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.31	5.37	7.25	0.47	0.94	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
alpha-HBDH	U/l	209	165	253	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	158	125	191	16.50	33.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	118	93	143	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C

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RANDOX

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL PPD
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.20	1.02	1.38	0.09	0.18	Vitros Magnetic HDL
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL PEGME
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.25	1.07	1.43	0.09	0.18	Direct Clearance Method
	mg/dl	48.3	41.3	55.3	3.50	7.00	
	mmol/l	1.25	1.07	1.43	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	48.3	41.3	55.3	3.50	7.00	
	mmol/l	1.42	1.20	1.64	0.11	0.22	HDL - Ultra
	mg/dl	54.8	46.3	63.3	4.25	8.50	
	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Immunoglobulin A	g/l	2.20	1.65	2.75	0.28	0.55	Immunoturbidimetric
	mg/dl	220	165	275	27.50	55.00	
Immunoglobulin G	g/l	6.74	5.53	7.95	0.61	1.21	Immunoturbidimetric
	mg/dl	674	553	795	60.50	121.00	
Immunoglobulin M	g/l	1.00	0.80	1.20	0.10	0.20	Immunoturbidimetric
	mg/dl	99.8	79.8	120	10.00	20.00	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
	mmol/l	1.50	1.23	1.77	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.5	11.1	15.9	1.20	2.40	
	mmol/l	1.50	1.23	1.77	0.14	0.27	Enzymatic Electrode
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P 37°C
	U/l	147	125	169	11.00	22.00	L->P 30°C
	U/l	103	88	118	7.50	15.00	L->P 25°C
	U/l	434	369	499	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
	U/l	410	348	472	31.00	62.00	P->L German methods 37°C
	U/l	296	251	341	22.50	45.00	P->L German methods 30°C
	U/l	208	176	240	16.00	32.00	P->L German methods 25°C
	U/l	415	353	477	31.00	62.00	P->L SFBC 37°C
	U/l	300	255	345	22.50	45.00	P->L SFBC 30°C
	U/l	210	179	241	15.50	31.00	P->L SFBC 25°C
	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	91	121	7.50	15.00	L->P IFCC 25°C

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	225	191	259	17.00	34.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
	U/l	222	178	266	22.00	44.00	Ortho Vitros Microslide Systems 37°C
	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	42	33	51	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Ion selective electrode
	mg/dl	0.678	0.596	0.760	0.04	0.08	
	mmol/l	1.00	0.88	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.691	0.608	0.774	0.04	0.08	
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Arsenazo III
	mg/dl	2.06	1.81	2.31	0.13	0.25	
	mmol/l	0.85	0.75	0.96	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.08	1.82	2.34	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Calmagite
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.04	1.80	2.28	0.12	0.24	
NEFA	mmol/l	1.45	1.16	1.74	0.15	0.29	Colorimetric
Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Gravimetric
	mg/l	13.0	10.4	15.6	1.30	2.60	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.28	3.66	4.90	0.31	0.62	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - direct
	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
	mmol/l	4.15	3.82	4.48	0.17	0.33	Enzymatic
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.95	4.76	7.14	0.60	1.19	
	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
PSA Total	ng/ml =	11.5	8.64	14.4	1.43	2.86	Beckman Access standardised to Hybritech
	ng/ml =	11.8	8.88	14.7	1.46	2.92	bioMerieux VIDAS TPSA
	ng/ml =	8.91	6.68	11.1	1.12	2.23	Abbott Architect
	ng/ml =	11.1	8.33	13.9	1.39	2.77	Cobas E411
	ng/ml =	11.3	8.47	14.1	1.42	2.83	Roche Cobas 6000/8000
	ng/ml =	9.15	6.87	11.4	1.14	2.28	Beckman DxI800 standardised to WHO IRP96/670

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
	mmol/l	146	139	153	3.50	7.00	Enzymatic
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 =	1.16	0.93	1.39	0.12	0.23	Abbott Architect
	µU/ml =	1.55	1.24	1.86	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.63	1.31	1.95	0.16	0.32	Roche Cobas 4000/E411
	µU/ml =	1.59	1.27	1.91	0.16	0.32	Roche Cobas e601/602
	µU/ml =	1.31	1.05	1.57	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.31	1.05	1.57	0.13	0.26	Beckman DxI 600/800 Access (3rd IS)
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas e402/e801
TIBC	µmol/l	42.3	33.4	51.2	4.45	8.90	Removal of excess free iron
	µg/dl	236	187	285	24.50	49.00	
	µmol/l	41.9	33.1	50.7	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	234	185	283	24.50	49.00	
	µmol/l	46.4	36.7	56.1	4.85	9.70	Direct Colorimetric
	µg/dl	259	205	313	27.00	54.00	
	µmol/l	45.5	36.0	55.0	4.75	9.50	Calculated from Transferrin
	µg/dl	254	201	307	26.50	53.00	
	µmol/l	48.9	38.6	59.2	5.15	10.30	Randox Direct
	µg/dl	273	216	330	28.50	57.00	

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	1.63	1.22	2.04	0.21	0.41	Abbott Architect
	ng/ml	1.06	0.794	1.33	0.13	0.27	
	ng/dl	106	79.4	133	13.30	26.60	Abbott Architect
	nmol/l	1.96	1.47	2.45	0.25	0.49	Roche Cobas 4000/E411
	ng/ml	1.28	0.957	1.60	0.16	0.32	
	ng/dl	128	95.7	160	16.15	32.30	Roche Cobas 4000/E411
	nmol/l	1.99	1.49	2.49	0.25	0.50	Roche Cobas e601/602
	ng/ml	1.30	0.970	1.63	0.17	0.33	
	ng/dl	130	97.0	163	16.50	33.00	Roche Cobas e601/602
Total T4	nmol/l	90.1	67.6	113	11.25	22.50	Abbott Architect
	µg/dl	7.03	5.27	8.79	0.88	1.76	
	ng/ml	70.3	52.7	87.9	8.80	17.60	Abbott Architect
	nmol/l	80.8	60.6	101	10.10	20.20	Siemens Immulite 2000/2500
	µg/dl	6.30	4.73	7.87	0.79	1.57	
	ng/ml	63.0	47.3	78.7	7.85	15.70	Siemens Immulite 2000/2500
	nmol/l	91.7	68.8	115	11.45	22.90	Roche Cobas 4000/E411
	µg/dl	7.15	5.37	8.93	0.89	1.78	
	ng/ml	71.5	53.7	89.3	8.90	17.80	Roche Cobas 4000/E411
	nmol/l	98.7	74.0	123	12.35	24.70	Microgenics DRI assay
	µg/dl	7.70	5.77	9.63	0.97	1.93	
	ng/ml	77.0	57.7	96.3	9.65	19.30	Microgenics DRI assay
Transferrin	g/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	mg/dl	187	150	224	18.50	37.00	

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.1	119	8.45	16.90	
	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	86.7	121	8.65	17.30	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.3	116	7.85	15.70	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	102	85.2	119	8.40	16.80	
	mmol/l	1.37	1.15	1.59	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	121	102	140	9.50	19.00	
UIBC	µmol/l	22.1	18.1	26.1	2.00	4.00	Direct Colorimetric
	µg/dl	124	101	147	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	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	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.91	5.16	6.66	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	
Urea	mmol/l	7.29	6.19	8.39	0.55	1.10	Ortho Vitros Microslide Systems
	mg/dl	43.8	37.2	50.4	3.30	6.60	

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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.39	6.29	8.49	0.55	1.10	Urease kinetic
	mg/dl	44.4	37.8	51.0	3.30	6.60	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease - hypochlorite
	mg/dl	44.0	37.4	50.6	3.30	6.60	
Vitamin B12	pmol/l	424	339	509	42.50	85.00	Roche Cobas e402/e801
	pg/ml	575	459	691	58.00	116.00	
Zinc	µmol/l	28.4	22.7	34.1	2.85	5.70	Colorimetric with deproteinisation
	µg/dl	185	148	222	18.50	37.00	

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METHOD (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		5.5	4.2	6.8	0.66	1.32	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.8	5.2	8.4	0.82	1.63	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		66.2	59.6	72.8	3.30	6.60	% of total Protein (Beckman Capillary)
beta-globulin		11.0	8.4	13.6	1.32	2.64	% of total Protein (Beckman Capillary)
gamma-globulin		10.5	8.0	13.0	1.26	2.52	% of total Protein (Beckman Capillary)

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	171	145	197	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	60	51	69	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	24.1	19.3	28.9	2.40	4.80	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	23.5	18.6	28.4	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Bilirubin Total	µmol/l	31.7	25.1	38.3	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.85	1.47	2.23	0.19	0.38	
	µmol/l	31.7	25.0	38.4	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazonium ion
	mg/dl	1.81	1.43	2.19	0.19	0.38	

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.06	1.86	2.26	0.10	0.20	Arsenazo III
	mg/dl	8.26	7.45	9.07	0.41	0.81	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	94.4	86.9	102	3.75	7.50	ISE indirect
Cholinesterase	U/l	6928	5543	8313	692.50	1385.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	198	163	233	17.50	35.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	12.5	9.99	15.0	1.26	2.51	Colorimetric
	µg/dl	79.5	63.5	95.5	8.00	16.00	
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	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.52	5.55	7.49	0.49	0.97	Glucose oxidase
	mg/dl	117	100	134	8.50	17.00	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PPD
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct Clearance Method
	mg/dl	54.0	45.9	62.1	4.05	8.10	

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Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	91.1	131	9.95	19.90	
	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	
Lactate	mmol/l	1.70	1.39	2.01	0.16	0.31	Colorimetric Lactate Oxidase
	mg/dl	15.3	12.5	18.1	1.40	2.80	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.610	0.778	0.04	0.08	
Magnesium	mmol/l	0.85	0.74	0.95	0.05	0.10	Arsenazo III
	mg/dl	2.06	1.81	2.31	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.04	1.80	2.28	0.12	0.24	
Osmolality	mOsm/kg	305	244	366	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	3.97	3.65	4.29	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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction kinetic
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.2	32.6	49.8	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	230	182	278	24.00	48.00	
	µmol/l	47.5	37.5	57.5	5.00	10.00	Calculated from Transferrin
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.4	112	7.55	15.10	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.1	116	7.95	15.90	
	mmol/l	1.12	0.95	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.6	115	7.75	15.50	
UIBC	µmol/l	21.3	17.5	25.1	1.90	3.80	Direct Colorimetric
	µg/dl	119	97.8	140	10.60	21.20	
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	5.93	5.16	6.70	0.39	0.77	
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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.8	33.8	45.8	3.00	6.00	Bromocresol Green
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	197	167	227	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	195	166	224	14.50	29.00	Beckman (Extinction Coefficient) 37°C
	U/l	279	237	321	21.00	42.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Beckman (Extinction Coefficient) 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	77	65	89	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	79	67	91	6.00	12.00	Other 2-chloro-pNPG3 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient) 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	23.4	18.7	28.1	2.35	4.70	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	23.4	18.5	28.3	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.37	1.08	1.66	0.15	0.29	
Bilirubin Total	µmol/l	35.6	28.1	43.1	3.75	7.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.08	1.64	2.52	0.22	0.44	
	µmol/l	34.8	27.5	42.1	3.65	7.30	DPD (Beckman AU)
	mg/dl	2.04	1.61	2.47	0.22	0.43	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase - IDMS
	mg/dl	163	142	184	10.50	21.00	
Chloride	mmol/l	92.3	84.9	99.7	3.70	7.40	ISE indirect
Cholinesterase	U/l	5661	4529	6793	566.00	1132.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	195	160	230	17.50	35.00	Beckman CK-NAC (Extinction Coeff) 37°C
	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	123	98.4	148	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	135	108	162	13.50	27.00	Enzymatic UV method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	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	121	96.8	145	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Beckman Szasz (Extinction Coeff) 37°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct Clearance Method
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.48	1.26	1.70	0.11	0.22	HDL - Ultra
	mg/dl	57.1	48.6	65.6	4.25	8.50	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.53	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	186	158	214	14.00	28.00	L to P Beckman (Extinction Coeff) 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	432	367	497	32.50	65.00	P->L Scandinavian & Dutch 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Osmolality	mOsm/kg	302	242	362	30.00	60.00	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	3.94	3.62	4.26	0.16	0.32	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	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.5	35.9	55.1	4.80	9.60	Direct Colorimetric
	µg/dl	254	201	307	26.50	53.00	
	µmol/l	45.7	36.1	55.3	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	255	202	308	26.50	53.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GK UV no correction
	mg/dl	100	84.0	116	8.00	16.00	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
UIBC	µmol/l	26.0	21.3	30.7	2.35	4.70	Direct Colorimetric
	µg/dl	145	119	171	13.00	26.00	
Uric Acid (Urate)	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	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	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	

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COBAS INTEGRA®

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	38.5	32.7	44.3	2.90	5.80	Turbidimetric Assays
	g/dl	3.85	3.27	4.43	0.29	0.58	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	131	111	151	10.00	20.00	Roche Integra AMP buffer 30°C
	U/l	107	91	123	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.0	19.0	29.0	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	23.9	18.9	28.9	2.50	5.00	Roche DPD JG standardised
	mg/dl	1.40	1.11	1.69	0.15	0.29	

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	32.0	25.3	38.7	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.87	1.48	2.26	0.20	0.39	
	µmol/l	31.1	24.6	37.6	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.82	1.44	2.20	0.19	0.38	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Diazonium ion
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.08	1.88	2.28	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.34	7.54	9.14	0.40	0.80	
	mmol/l	2.05	1.85	2.25	0.10	0.20	NM-BAPTA
	mg/dl	8.22	7.41	9.03	0.41	0.81	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	93.4	86.0	101	3.70	7.40	ISE indirect
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	95	135	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	137	110	164	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	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	126	101	151	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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
Glucose	mmol/l	6.46	5.49	7.43	0.49	0.97	Hexokinase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.9	12.2	17.6	1.35	2.70	
LD (LDH)	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
	U/l	156	133	179	11.50	23.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.90	2.40	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.0	44.8	67.2	5.60	11.20	Biuret reaction end point
	g/dl	5.60	4.48	6.72	0.56	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.0	33.2	50.8	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	235	186	284	24.50	49.00	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.1	120	8.45	16.90	
UIBC	µmol/l	21.8	17.9	25.7	1.95	3.90	Direct Colorimetric
	µg/dl	122	100	144	11.00	22.00	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm
	mg/dl	6.05	5.28	6.82	0.39	0.77	
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.0	48.8	3.20	6.40	
	mmol/l	7.05	5.99	8.11	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	31.2	24.7	37.7	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Calcium	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	
Cholesterol	mmol/l	4.24	3.69	4.79	0.28	0.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	164	142	186	11.00	22.00	
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Glucose	mmol/l	6.80	5.78	7.82	0.51	1.02	Glucose oxidase
	mg/dl	123	104	142	9.50	19.00	
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	
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	38.8	33.0	44.6	2.90	5.80	Bromocresol Green
	g/dl	3.88	3.30	4.46	0.29	0.58	
Alkaline Phosphatase	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	135	115	155	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	111	94	128	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
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	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	98.4	90.5	106	3.95	7.90	ISE direct
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	81	67	95	7.00	14.00	CK-NAC (IFCC) 25°C
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
	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	1.30	1.11	1.49	0.10	0.19	Direct HDL PEGME
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	21.6	17.7	25.5	1.95	3.90	Colorimetric without ppt.
	µg/dl	121	98.9	143	11.05	22.10	
Magnesium	mmol/l	0.91	0.81	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.79	3.49	4.09	0.15	0.30	ISE method - direct
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.6	120	8.20	16.40	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.22	5.41	7.03	0.41	0.81	
Urea	mmol/l	7.17	6.10	8.24	0.54	1.07	Urease kinetic
	mg/dl	43.1	36.7	49.5	3.20	6.40	
	mmol/l	7.17	6.09	8.25	0.54	1.08	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Ortho Vitros Microslide Systems 37°C
	U/l	36	29	43	3.50	7.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	13.4	10.6	16.2	1.40	2.80	BuBc Vitros Slide
	mg/dl	0.784	0.620	0.948	0.08	0.16	
Bilirubin Total	µmol/l	28.4	22.5	34.3	2.95	5.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.66	1.32	2.00	0.17	0.34	
Bilirubin, Unconjugated Vitros BU	µmol/l	17.7	14.0	21.4	1.85	3.70	BuBc Vitros Slide
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	Ortho Vitros Microslide Systems
CK Total	U/l	175	143	207	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	59	50	68	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Ortho Vitros Microslide Systems
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.25	1.07	1.43	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	48.3	41.3	55.3	3.50	7.00	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	225	191	259	17.00	34.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	222	178	266	22.00	44.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.85	0.75	0.96	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.08	1.82	2.34	0.13	0.26	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Triglycerides	mmol/l	1.37	1.15	1.59	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	121	102	140	9.50	19.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.29	6.19	8.39	0.55	1.10	Ortho Vitros Microslide Systems
	mg/dl	43.8	37.2	50.4	3.30	6.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Green
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	Roche Integra AMP buffer 37°C
	U/l	133	113	153	10.00	20.00	Roche Integra AMP buffer 30°C
	U/l	109	93	125	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	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	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	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	24.2	19.1	29.3	2.55	5.10	Roche DPD JG standardised
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	30.4	24.0	36.8	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Diazonium ion
	mg/dl	1.85	1.46	2.24	0.20	0.39	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	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	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.50	1.21	1.79	0.15	0.29	
Glucose	mmol/l	6.50	5.52	7.48	0.49	0.98	Hexokinase
	mg/dl	117	99.5	135	8.75	17.50	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL Roche 4th Generation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
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
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	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	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.1	121	8.45	16.90	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			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
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			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	
	g/l	40.2	34.1	46.3	3.05	6.10	Turbidimetric Assays
	g/dl	4.02	3.41	4.63	0.31	0.61	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	107	91	123	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	22.9	18.3	27.5	2.30	4.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Colorimetric
	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	23.9	18.9	28.9	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.40	1.11	1.69	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	24.1	19.1	29.1	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.41	1.12	1.70	0.15	0.29	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Roche DPD JG standardised
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Bilirubin Total	µmol/l	29.7	23.4	36.0	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	29.8	23.6	36.0	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.38	2.10	0.18	0.36	
	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazonium ion
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.07	1.87	2.27	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.30	7.49	9.11	0.41	0.81	
	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	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	158	138	178	10.00	20.00	
Chloride	mmol/l	90.5	83.2	97.8	3.65	7.30	ISE indirect
Cholinesterase	U/l	5615	4492	6738	561.50	1123.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	96	136	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	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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Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	137	110	164	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	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	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric with ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.63	1.33	1.93	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.0	17.4	1.35	2.70	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
LD (LDH)	U/l	210	178	242	16.00	32.00	L->P 37°C
	U/l	152	129	175	11.50	23.00	L->P 30°C
	U/l	106	90	122	8.00	16.00	L->P 25°C
	U/l	397	337	457	30.00	60.00	P->L German methods 37°C
	U/l	287	243	331	22.00	44.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	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
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.610	0.778	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.38	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	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
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	
	g/l	56.8	45.5	68.1	5.65	11.30	Biuret reaction kinetic
	g/dl	5.68	4.55	6.81	0.57	1.13	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	11.1	8.35	13.9	1.38	2.75	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.64	1.31	1.97	0.17	0.33	Roche Cobas e601/602
TIBC	µmol/l	40.1	31.7	48.5	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	224	177	271	23.50	47.00	
	µmol/l	47.1	37.2	57.0	4.95	9.90	Calculated from Transferrin
	µg/dl	263	208	318	27.50	55.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.1	121	8.45	16.90	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.1	121	8.45	16.90	
UIBC	µmol/l	21.5	17.6	25.4	1.95	3.90	Direct Colorimetric
	µg/dl	120	98.4	142	10.80	21.60	
Uric Acid (Urate)	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	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	129	110	148	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	24.9	19.7	30.1	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Roche DPD JG standardised
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	21.9	17.3	26.5	2.30	4.60	Roche DPD Doumas standardised
	mg/dl	1.28	1.01	1.55	0.14	0.27	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	30.1	23.7	36.5	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	29.7	23.5	35.9	3.10	6.20	Diazonium ion
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	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	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	90.5	83.3	97.7	3.60	7.20	ISE indirect
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	139	111	167	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	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	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.9	120	9.05	18.10	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.63	1.34	1.92	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.1	17.3	1.30	2.60	
LD (LDH)	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	28	40	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			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	4.00	3.68	4.32	0.16	0.32	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	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.2	32.6	49.8	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	230	182	278	24.00	48.00	
Triglycerides	mmol/l	1.18	1.00	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	88.1	120	7.95	15.90	
	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	103	86.5	120	8.25	16.50	
UIBC	µmol/l	23.0	18.9	27.1	2.05	4.10	Direct Colorimetric
	µg/dl	129	106	152	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.98	5.21	6.75	0.39	0.77	
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease kinetic
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.53	6.40	8.66	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Purple
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	41.3	35.1	47.5	3.10	6.20	Turbidimetric Assays
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	107	143	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	103	88	118	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	164	139	189	12.50	25.00	Colorimetric 37°C
	U/l	128	108	148	10.00	20.00	Colorimetric 30°C
	U/l	105	89	121	8.00	16.00	Colorimetric 25°C
ALT (GPT)	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	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	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	22.8	18.3	27.3	2.25	4.50	Enzymatic Colorimetric

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	23.6	18.6	28.6	2.50	5.00	Roche DPD JG standardised
	mg/dl	1.38	1.09	1.67	0.15	0.29	
	µmol/l	19.4	15.3	23.5	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	29.9	23.6	36.2	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	1.38	2.12	0.19	0.37	
	µmol/l	30.4	24.1	36.7	3.15	6.30	Diazonium ion
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.08	1.87	2.29	0.11	0.21	NM-BAPTA
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	158	137	179	10.50	21.00	
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	138	111	165	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.56	1.25	1.87	0.16	0.31	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	138	111	165	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.56	1.25	1.87	0.16	0.31	
gamma-GT	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	22	32	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	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
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Roche 4th Generation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
Iron	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric with ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
Lactate	mmol/l	1.60	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	211	179	243	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.693	0.610	0.776	0.04	0.08	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
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	
Protein Total	g/l	57.2	45.8	68.6	5.70	11.40	Biuret reaction end point
	g/dl	5.72	4.58	6.86	0.57	1.14	
TIBC	µmol/l	41.3	32.6	50.0	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	231	182	280	24.50	49.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.6	121	8.70	17.40	
UIBC	µmol/l	22.6	18.5	26.7	2.05	4.10	Direct Colorimetric
	µg/dl	126	103	149	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	289	246	332	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	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	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.0	20.0	30.0	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	17.5	13.9	21.1	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	23.1	18.3	27.9	2.40	4.80	Diazo with Sulphanilic Acid
	mg/dl	1.35	1.07	1.63	0.14	0.28	
	µmol/l	20.5	16.2	24.8	2.15	4.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.20	0.948	1.45	0.13	0.25	
Bilirubin Total	µmol/l	35.5	28.0	43.0	3.75	7.50	Diazo with Sulphanilic Acid
	mg/dl	2.08	1.64	2.52	0.22	0.44	
	µmol/l	33.4	26.4	40.4	3.50	7.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.95	1.54	2.36	0.21	0.41	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	141	181	10.00	20.00	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	91.6	84.2	99.0	3.70	7.40	ISE direct
CK Total	U/l	218	179	257	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	119	95.5	143	11.75	23.50	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	136	109	163	13.50	27.00	Enzymatic UV method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.54	5.56	7.52	0.49	0.98	Hexokinase
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	6.55	5.56	7.54	0.50	0.99	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	400	340	460	30.00	60.00	P->L German methods 37°C
	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - direct

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Enzymatic
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	146	139	153	3.50	7.00	Enzymatic
TIBC	µmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	µg/dl	273	216	330	28.50	57.00	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.5	120	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.22	5.41	7.03	0.41	0.81	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.06	5.28	6.84	0.39	0.78	
Urea	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	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	163	139	187	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	20.8	16.4	25.2	2.20	4.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.22	0.959	1.48	0.13	0.26	
Bilirubin Total	µmol/l	35.7	28.2	43.2	3.75	7.50	Oxidation to Biliverdin/Vanadate
	mg/dl	2.09	1.65	2.53	0.22	0.44	
Calcium	mmol/l	2.03	1.83	2.23	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.14	7.33	8.95	0.41	0.81	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Arsenazo III
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect
CK Total	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	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	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct Clearance Method
	mg/dl	44.4	37.7	51.1	3.35	6.70	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	418	356	480	31.00	62.00	P->L German methods 37°C
	U/l	211	179	243	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Xylidyl Blue
	mg/dl	2.02	1.78	2.26	0.12	0.24	
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	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.9	45.6	68.2	5.65	11.30	Biuret reaction end point
	g/dl	5.69	4.56	6.82	0.57	1.13	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	44.1	34.8	53.4	4.65	9.30	Calculated from Transferrin
	µg/dl	247	195	299	26.00	52.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.5	121	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
Urea	mmol/l	7.76	6.59	8.93	0.59	1.17	Urease kinetic
	mg/dl	46.6	39.6	53.6	3.50	7.00	
	mmol/l	7.76	6.60	8.92	0.58	1.16	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.25	0.983	1.52	0.13	0.27	
Bilirubin Total	µmol/l	36.0	28.5	43.5	3.75	7.50	Oxidation to Biliverdin/Vanadate
	mg/dl	2.11	1.67	2.55	0.22	0.44	
Calcium	mmol/l	2.06	1.86	2.26	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.26	7.45	9.07	0.41	0.81	
	mmol/l	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.19	3.65	4.73	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	141	183	10.50	21.00	
	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
CK Total	U/l	190	156	224	17.00	34.00	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	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.30	5.36	7.24	0.47	0.94	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct Clearance Method
	mg/dl	45.5	38.6	52.4	3.45	6.90	
Iron	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
LD (LDH)	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.692	0.609	0.775	0.04	0.08	
Magnesium	mmol/l	0.82	0.72	0.92	0.05	0.10	Xylidyl Blue
	mg/dl	1.99	1.75	2.23	0.12	0.24	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.84	3.53	4.15	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.3	37.4	57.2	4.95	9.90	Direct Colorimetric
	µg/dl	264	209	319	27.50	55.00	
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	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Urea	mmol/l	7.77	6.60	8.94	0.59	1.17	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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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	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	164	139	189	12.50	25.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P NVKC 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	47	38	56	4.50	9.00	Tris buffer with P5P 37°C
	U/l	47	38	56	4.50	9.00	Tris buffer with P5P NVKC 37°C
	U/l	49	39	59	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	16.4	12.9	19.9	1.75	3.50	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.959	0.755	1.16	0.10	0.20	
Bilirubin Total	µmol/l	33.8	26.7	40.9	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.98	1.56	2.40	0.21	0.42	
Calcium	mmol/l	2.01	1.81	2.21	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.06	7.25	8.87	0.41	0.81	
Cholesterol	mmol/l	3.58	3.12	4.04	0.23	0.46	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	

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SIEMENS DIMENSION EXL®

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	60	51	69	4.50	9.00	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	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	106	85	127	10.50	21.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.59	3.91	5.27	0.34	0.68	
	mmol/l	1.44	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	3.87	3.56	4.18	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.58	6.44	8.72	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.7	52.5	3.45	6.90	
	mmol/l	7.58	6.44	8.72	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1586UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	44	36	52	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
Bilirubin Total	µmol/l	33.2	26.2	40.2	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.94	1.53	2.35	0.21	0.41	
Cholesterol	mmol/l	3.75	3.26	4.24	0.25	0.49	Dimension-Siemens reagents
	mg/dl	145	126	164	9.50	19.00	
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	
gamma-GT	U/l	58	49	67	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Hexokinase
	mg/dl	117	99.1	135	8.95	17.90	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL PEGME
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Protein Total	g/l	60.8	48.6	73.0	6.10	12.20	Biuret reaction end point
	g/dl	6.08	4.86	7.30	0.61	1.22	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-12-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	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	

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