

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	125	100	150	12.50	25.00	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	119	95.5	143	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
	ng/ml	2.06	1.65	2.47	0.21	0.41	
Digoxin	nmol/l	2.06	1.65	2.47	0.21	0.41	Immunoturbidimetric
	ng/ml	1.61	1.29	1.93	0.16	0.32	
Folate	nmol/l	46.7	35.5	57.9	5.60	11.20	Roche Cobas 6000/8000
	ng/ml	20.6	15.7	25.5	2.45	4.90	
Free T4	pmol/l	16.6	12.5	20.7	2.05	4.10	Abbott Architect
	ng/dl	1.29	0.975	1.61	0.16	0.32	
	pg/ml	12.9	9.75	16.1	1.58	3.15	Abbott Architect
	pmol/l	17.1	12.8	21.4	2.15	4.30	
	ng/dl	1.33	0.998	1.66	0.17	0.33	Siemens Centaur XP/XPT/Classic
	pg/ml	13.3	9.98	16.6	1.66	3.32	
	pmol/l	17.7	13.3	22.1	2.20	4.40	Beckman Access
	ng/dl	1.38	1.04	1.72	0.17	0.34	
pg/ml	13.8	10.4	17.2	1.70	3.40	Beckman Access	

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Free T4	pmol/l	16.8	12.6	21.0	2.10	4.20	Beckman Dxl800
	ng/dl	1.31	0.983	1.64	0.16	0.33	
	pg/ml	13.1	9.83	16.4	1.64	3.27	Beckman Dxl800
	pmol/l	19.6	14.7	24.5	2.45	4.90	Siemens Immulite 2000/2500
	ng/dl	1.53	1.15	1.91	0.19	0.38	
	pg/ml	15.3	11.5	19.1	1.90	3.80	Siemens Immulite 2000/2500
	pmol/l	35.7	26.8	44.6	4.45	8.90	Vitros ECi
	ng/dl	2.78	2.09	3.47	0.35	0.69	
	pg/ml	27.8	20.9	34.7	3.45	6.90	Vitros ECi
	pmol/l	21.4	16.1	26.7	2.65	5.30	Roche Cobas E411
	ng/dl	1.67	1.26	2.08	0.21	0.41	
	pg/ml	16.7	12.6	20.8	2.05	4.10	Roche Cobas E411
	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 6000/8000
	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 6000/8000
Gentamicin	pmol/l	19.5	14.6	24.4	2.45	4.90	Biomerieux Vidas FT4N Kit
	ng/dl	1.52	1.14	1.90	0.19	0.38	
	pg/ml	15.2	11.4	19.0	1.90	3.80	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.55	6.04	9.06	0.76	1.51	Immunoturbidimetric
	µg/ml	3.61	2.89	4.33	0.36	0.72	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C

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gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	21	29	2.00	4.00	Gamma glutamyl-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
	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	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.02	5.11	6.93	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Oxygen electrode
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.0	43.2	58.8	3.90	7.80	

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Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros Magnetic HDL
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PEGME
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct Clearance Method
	mg/dl	49.8	42.1	57.5	3.85	7.70	
	mmol/l	1.31	1.12	1.50	0.10	0.19	Vitros 5.1 FS microtip assay
	mg/dl	50.6	43.2	58.0	3.70	7.40	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.44	1.22	1.66	0.11	0.22	HDL - Ultra
	mg/dl	55.6	47.1	64.1	4.25	8.50	
mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation	
mg/dl	55.6	47.1	64.1	4.25	8.50		
Immunoglobulin A	g/l	1.71	1.28	2.14	0.22	0.43	Immunoturbidimetric
	mg/dl	171	128	214	21.50	43.00	
Immunoglobulin G	g/l	7.18	5.89	8.47	0.65	1.29	Immunoturbidimetric
	mg/dl	718	589	847	64.50	129.00	
Immunoglobulin M	g/l	0.85	0.68	1.02	0.09	0.17	Immunoturbidimetric
	mg/dl	85.0	68.0	102	8.50	17.00	
Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric with ppt.
	µg/dl	114	93.4	135	10.30	20.60	
	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	20.3	16.7	23.9	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	93.4	133	9.80	19.60	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Ion selective electrode
	mg/dl	13.9	11.4	16.4	1.25	2.50	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.47	1.21	1.73	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.9	15.5	1.15	2.30	
mmol/l	1.58	1.30	1.86	0.14	0.28	Enzymatic Electrode	
mg/dl	14.2	11.7	16.7	1.25	2.50		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	183	156	210	13.50	27.00	L->P 37°C
	U/l	132	113	151	9.50	19.00	L->P 30°C
	U/l	93	79	107	7.00	14.00	L->P 25°C
	U/l	433	368	498	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	313	266	360	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	220	187	253	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	396	336	456	30.00	60.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	170	232	15.50	31.00	P->L German methods 25°C
	U/l	408	347	469	30.50	61.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C
	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
U/l	104	89	119	7.50	15.00	L->P IFCC 25°C	

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Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	224	180	268	22.00	44.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.09	0.06	0.12	Ion selective electrode
	mg/dl	0.674	0.593	0.755	0.04	0.08	
	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.674	0.594	0.754	0.04	0.08	
	mmol/l	0.97	0.85	1.08	0.06	0.12	Randox Colorimetric
	mg/dl	0.671	0.590	0.752	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.15	1.90	2.40	0.13	0.25	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	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	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	

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Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.13	1.87	2.39	0.13	0.26	
NEFA	mmol/l	1.43	1.22	1.64	0.11	0.21	Colorimetric
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
	mOsm/kg	302	241	363	30.50	61.00	Freezing point depression
	mOsm/kg	303	242	364	30.50	61.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.8	9.38	14.2	1.21	2.42	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	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	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.02	3.70	4.34	0.16	0.32	Enzymatic
	mmol/l	3.90	3.58	4.22	0.16	0.32	ISE method - direct
	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction kinetic
	g/dl	5.79	4.63	6.95	0.58	1.16	
PSA Total	ng/ml =	17.8	13.4	22.2	2.20	4.40	Beckman Access standardised to Hybritech

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PSA Total	ng/ml =	14.6	10.9	18.3	1.85	3.70	bioMerieux VIDAS TPSA
	ng/ml =	13.2	9.94	16.5	1.63	3.26	Siemens Centaur XP/XPT/Classic
	ng/ml =	11.8	8.87	14.7	1.47	2.93	Abbott Architect
	ng/ml =	16.4	12.3	20.5	2.05	4.10	Cobas E411
	ng/ml =	16.3	12.2	20.4	2.05	4.10	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.10	0.88	1.32	0.11	0.22	Abbott Architect
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.56	1.25	1.87	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.65	1.32	1.98	0.17	0.33	Roche Cobas E411
	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Beckman Dxl800 Hyper TSH
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Centaur XP/XPT/Classic TSH3-Ultra
µU/ml =	1.25	1.00	1.50	0.13	0.25	Beckman Dxl 600/800 Access (3rd IS)	
TIBC	µmol/l	45.1	35.7	54.5	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	252	200	304	26.00	52.00	
	µmol/l	39.7	31.3	48.1	4.20	8.40	Removal of excess free iron
	µg/dl	222	175	269	23.50	47.00	

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TIBC	µmol/l	41.1	32.5	49.7	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	230	182	278	24.00	48.00	
	µmol/l	44.7	35.3	54.1	4.70	9.40	Direct Colorimetric
	µg/dl	250	197	303	26.50	53.00	
	µmol/l	44.9	35.5	54.3	4.70	9.40	Calculated from Transferrin
	µg/dl	251	198	304	26.50	53.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.81	1.36	2.26	0.23	0.45	Abbott Architect
	ng/ml	1.18	0.885	1.48	0.15	0.30	
	ng/dl	118	88.5	148	14.75	29.50	Abbott Architect
	nmol/l	1.98	1.48	2.48	0.25	0.50	Beckman Access
	ng/ml	1.29	0.963	1.62	0.16	0.33	
	ng/dl	129	96.3	162	16.35	32.70	Beckman Access
	nmol/l	2.14	1.60	2.68	0.27	0.54	Siemens Centaur XP/XPT/Classic
	ng/ml	1.39	1.04	1.74	0.18	0.35	
	ng/dl	139	104	174	17.50	35.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.02	1.52	2.52	0.25	0.50	BioMerieux Vidas
	ng/ml	1.32	0.990	1.65	0.17	0.33	
	ng/dl	132	99.0	165	16.50	33.00	BioMerieux Vidas
nmol/l	2.08	1.56	2.60	0.26	0.52	Roche Cobas E411	
ng/ml	1.35	1.02	1.68	0.17	0.33		
ng/dl	135	102	168	16.50	33.00	Roche Cobas E411	

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Total T3	nmol/l	2.04	1.53	2.55	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.33	0.996	1.66	0.17	0.33	
	ng/dl	133	99.6	166	16.70	33.40	Roche Cobas 6000/8000
Total T4	nmol/l	93.5	70.1	117	11.70	23.40	Abbott Architect
	µg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	Abbott Architect
	nmol/l	87.5	65.6	109	10.95	21.90	Siemens Centaur XP/XPT/Classic
	µg/dl	6.83	5.12	8.54	0.86	1.71	
	ng/ml	68.3	51.2	85.4	8.55	17.10	Siemens Centaur XP/XPT/Classic
	nmol/l	93.2	69.9	117	11.65	23.30	Siemens Immulite 2000/2500
	µg/dl	7.27	5.45	9.09	0.91	1.82	
	ng/ml	72.7	54.5	90.9	9.10	18.20	Siemens Immulite 2000/2500
	nmol/l	86.7	65.0	108	10.85	21.70	Roche Cobas E411
	µg/dl	6.76	5.07	8.45	0.85	1.69	
	ng/ml	67.6	50.7	84.5	8.45	16.90	Roche Cobas E411
	nmol/l	86.6	64.9	108	10.85	21.70	Roche Cobas 6000/8000
	µg/dl	6.75	5.06	8.44	0.85	1.69	
	ng/ml	67.5	50.6	84.4	8.45	16.90	Roche Cobas 6000/8000
	nmol/l	113	85.0	141	14.00	28.00	Microgenics DRI assay
	µg/dl	8.81	6.63	11.0	1.09	2.18	
	ng/ml	88.1	66.3	110	10.90	21.80	Microgenics DRI assay
nmol/l	105	78.7	131	13.15	26.30	Thermo Scientific - DRI	
µg/dl	8.19	6.14	10.2	1.03	2.05		
ng/ml	81.9	61.4	102	10.25	20.50	Thermo Scientific - DRI	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.90	1.52	2.28	0.19	0.38	Immunoturbidimetric
	mg/dl	190	152	228	19.00	38.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.07	0.90	1.25	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.9	108	7.50	15.00	
mmol/l	1.22	1.02	1.42	0.10	0.20	Ortho Vitros Microslide Systems	
mg/dl	108	90.3	126	8.85	17.70		
UIBC	µmol/l	20.1	16.5	23.7	1.80	3.60	Direct Colorimetric
	µg/dl	112	92.2	132	9.90	19.80	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	7.32	6.23	8.41	0.55	1.09	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease hypochlorite
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	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	Spectrophotometric at 280-290
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Vitamin B12	pmol/l	447	358	536	44.50	89.00	Roche Cobas E411
	pg/ml	606	485	727	60.50	121.00	
Zinc	µmol/l	24.4	19.5	29.3	2.45	4.90	Colorimetric with deproteinisation
	µg/dl	159	127	191	16.00	32.00	

**MEAN OF ALL INSTRUMENTS (Elec.)****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin (electrophoresis)		68.7	61.9	75.5	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.5	4.2	6.8	0.66	1.32	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.9	5.2	8.6	0.83	1.66	% of total Protein (Beckman Capillary)
beta-globulin		9.1	6.9	11.3	1.09	2.18	% of total Protein (Beckman Capillary)
gamma-globulin		9.8	7.5	12.2	1.18	2.35	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	137	117	157	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	96	128	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	33.0	26.1	39.9	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.93	1.53	2.33	0.20	0.40	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	32.1	25.3	38.9	3.40	6.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.88	1.48	2.28	0.20	0.40	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	114	91.1	137	11.45	22.90	Enzymatic UV method
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.30	5.36	7.24	0.47	0.94	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.51	5.54	7.48	0.49	0.97	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	
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	
LD (LDH)	U/l	415	353	477	31.00	62.00	P->L German methods 37°C
	U/l	300	255	345	22.50	45.00	P->L German methods 30°C
	U/l	210	179	241	15.50	31.00	P->L German methods 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	416	353	479	31.50	63.00	P->L SFBC 37°C
	U/l	300	255	345	22.50	45.00	P->L SFBC 30°C
	U/l	211	179	243	16.00	32.00	P->L SFBC 25°C
	U/l	210	178	242	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	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.98	2.54	0.14	0.28	
Phosphate Inorganic	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
Urea	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.27	5.46	7.08	0.41	0.81	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	150	127	173	11.50	23.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	35	53	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin, Unconjugated Vitros BU	µmol/l	16.9	13.4	20.4	1.75	3.50	BuBc Vitros Slide
	mg/dl	0.989	0.784	1.19	0.10	0.21	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5327	4262	6392	532.50	1065.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	175	143	207	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.02	5.11	6.93	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros Magnetic HDL
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
Iron	µmol/l	20.3	16.7	23.9	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	93.4	133	9.80	19.60	
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	224	180	268	22.00	44.00	Ortho Vitros Microslide Systems 37°C
	U/l	32	26	38	3.00	6.00	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	45.1	35.7	54.5	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	252	200	304	26.00	52.00	

**Ortho VITROS®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	108	90.3	126	8.85	17.70	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
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	
Creatinine	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.8	105	7.25	14.50	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.3	50.3	3.25	6.50	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	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	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.84	6.32	0.37	0.74	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	28	40	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	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.7	18.9	28.5	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.924	1.44	0.13	0.26	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Roche JG factored
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazonium ion
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	93.3	85.9	101	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5426	4340	6512	543.00	1086.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	185	151	219	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	64	94	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
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		
µmol/l	129	103	155	13.00	26.00	IDMS traceable	
mg/dl	1.46	1.16	1.76	0.15	0.30		
D-3-Hydroxybutyrate	mmol/l	0.25	0.21	0.29	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 6000/8000
	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 6000/8000
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

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.7	132	10.15	20.30	
	µmol/l	20.3	16.6	24.0	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P 37°C
	U/l	142	121	163	10.50	21.00	L->P 30°C
	U/l	100	85	115	7.50	15.00	L->P 25°C
	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.678	0.596	0.760	0.04	0.08	
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	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Osmolality	mOsm/kg	309	247	371	31.00	62.00	Calculated
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction kinetic
	g/dl	5.78	4.62	6.94	0.58	1.16	
PSA Total	ng/ml =	16.3	12.2	20.4	2.05	4.10	Roche Cobas 6000/8000
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
TIBC	µmol/l	39.8	31.5	48.1	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	222	176	268	23.00	46.00	
	µmol/l	46.9	37.1	56.7	4.90	9.80	Calculated from Transferrin
	µg/dl	262	207	317	27.50	55.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.04	1.53	2.55	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.33	0.996	1.66	0.17	0.33	
	ng/dl	133	99.6	166	16.70	33.40	Roche Cobas 6000/8000
Total T4	nmol/l	86.6	64.9	108	10.85	21.70	Roche Cobas 6000/8000
	µg/dl	6.75	5.06	8.44	0.85	1.69	
	ng/ml	67.5	50.6	84.4	8.45	16.90	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.9	110	7.40	14.80	
	mmol/l	1.07	0.90	1.24	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
UIBC	µmol/l	18.9	15.5	22.3	1.70	3.40	Direct Colorimetric
	µg/dl	106	86.6	125	9.70	19.40	
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	7.18	6.11	8.25	0.54	1.07	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Green
	g/dl	4.32	3.68	4.96	0.32	0.64	
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	114	97	131	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	152	129	175	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	97	82	112	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	99.2	91.3	107	3.95	7.90	ISE indirect
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	
	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	159	138	180	10.50	21.00	
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	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.5	147	12.25	24.50	Roche Creatinine Plus
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	115	92.3	138	11.35	22.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
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

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	
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	
LD (LDH)	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
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.68	3.97	5.39	0.36	0.71	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
mg/dl	4.53	3.84	5.22	0.35	0.69		
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.9	110	7.40	14.80	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	

**Roche Cobas C111®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
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	0.30	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	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Purple
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	110	93	127	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	20.0	15.8	24.2	2.10	4.20	Roche JG factored
mg/dl	1.17	0.924	1.42	0.12	0.25		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	28.2	22.3	34.1	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazonium ion
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	93.4	85.9	101	3.75	7.50	ISE indirect
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	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
CK Total	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
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	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	123	98.4	148	12.30	24.60	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	44	38	50	3.00	6.00	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	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.29	5.34	7.24	0.48	0.95	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.58	1.29	1.87	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.6	16.8	1.30	2.60	
LD (LDH)	U/l	390	332	448	29.00	58.00	P->L German methods 37°C
	U/l	282	240	324	21.00	42.00	P->L German methods 30°C
	U/l	198	168	228	15.00	30.00	P->L German methods 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.6	32.1	49.1	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	227	179	275	24.00	48.00	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.6	109	7.60	15.20	
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	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	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	

**Roche Cobas C311®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Turbidimetric Assays
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	135	114	156	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	105	89	121	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	19.9	15.7	24.1	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	20.2	16.0	24.4	2.10	4.20	Roche JG factored
	mg/dl	1.18	0.936	1.42	0.12	0.24	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	17.0	13.4	20.6	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazonium ion
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	94.2	86.7	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5401	4321	6481	540.00	1080.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	185	151	219	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	64	94	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.685	0.602	0.768	0.04	0.08	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.95	2.47	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	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.4	31.9	48.9	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	226	178	274	24.00	48.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
UIBC	μmol/l	22.3	18.3	26.3	2.00	4.00	Direct Colorimetric
	μg/dl	125	102	148	11.50	23.00	
Urea	mmol/l	7.02	5.96	8.08	0.53	1.06	Urease kinetic
	mg/dl	42.2	35.8	48.6	3.20	6.40	
	mmol/l	7.02	5.97	8.07	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	



Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.7	48.1	3.10	6.20	Bromocresol Green
	g/dl	4.19	3.57	4.81	0.31	0.62	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	194	165	223	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.6	13.2	20.0	1.70	3.40	Enzymatic
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	33.4	26.3	40.5	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.95	1.54	2.36	0.21	0.41	
	µmol/l	31.3	24.7	37.9	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Chloride	mmol/l	95.0	87.4	103	3.80	7.60	ISE direct

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1401UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.52	3.93	5.11	0.30	0.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	174	152	196	11.00	22.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	226	185	267	20.50	41.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	120	95.6	144	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.58	5.59	7.57	0.50	0.99	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	6.69	5.69	7.69	0.50	1.00	Glucose oxidase
	mg/dl	121	103	139	9.00	18.00	
Iron	µmol/l	21.3	17.5	25.1	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.8	140	10.60	21.20	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	401	341	461	30.00	60.00	P->L German methods 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.08	0.06	0.12	Colorimetric
	mg/dl	0.671	0.590	0.752	0.04	0.08	
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1401UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2023-04-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Enzymatic
	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - direct
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	µmol/l	46.4	36.7	56.1	4.85	9.70	Direct Colorimetric
	µg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	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	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

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

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Green
	g/dl	4.11	3.50	4.72	0.31	0.61	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
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	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	32.6	25.7	39.5	3.45	6.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.91	1.50	2.32	0.21	0.41	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.23	2.00	2.46	0.12	0.23	Arsenazo III
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
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	
Cholinesterase	U/l	5739	4591	6887	574.00	1148.00	Colorimetric Butyrylthiocholine 37°C

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

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	117	93.5	141	11.75	23.50	Enzymatic UV method
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)
mg/dl	1.39	1.11	1.67	0.14	0.28		
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.15	0.98	1.33	0.09	0.18	Direct Clearance Method
	mg/dl	44.4	37.6	51.2	3.40	6.80	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.41	1.16	1.66	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.5	14.9	1.10	2.20	
LD (LDH)	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	206	175	237	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.682	0.600	0.764	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	

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

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.1	44.8	67.4	5.65	11.30	Biuret reaction end point
	g/dl	5.61	4.48	6.74	0.57	1.13	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	43.4	34.3	52.5	4.55	9.10	FE+UIBC(saturation with iron)
	μg/dl	243	192	294	25.50	51.00	
	μmol/l	45.2	35.7	54.7	4.75	9.50	Direct Colorimetric
	μg/dl	253	200	306	26.50	53.00	
	μmol/l	42.3	33.4	51.2	4.45	8.90	Calculated from Transferrin
	μg/dl	236	187	285	24.50	49.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
Urea	mmol/l	7.57	6.43	8.71	0.57	1.14	Urease kinetic
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	48	38	58	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	40	62	5.50	11.00	Tris buffer with P5P NVKC 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.6	10.7	16.5	1.45	2.90	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.796	0.626	0.966	0.09	0.17	
Bilirubin Total	µmol/l	30.3	24.0	36.6	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.48	3.02	3.94	0.23	0.46	Cholesterol Oxidase - Abell Kendall
	mg/dl	134	117	151	8.50	17.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.59	3.12	4.06	0.24	0.47	Dimension-Siemens reagents
	mg/dl	139	120	158	9.50	19.00	
CK Total	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PEGME
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
LD (LDH)	U/l	192	163	221	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	137	110	164	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Methylthymol blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	142	134	150	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	0.99	0.83	1.14	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.3	73.4	101	6.95	13.90	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction
Urea	mg/dl	89.4	74.9	104	7.25	14.50	Urease kinetic
	mmol/l	7.22	6.14	8.30	0.54	1.08	
	mg/dl	43.4	36.9	49.9	3.25	6.50	
Uric Acid (Urate)	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
	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	
mg/dl	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290	
	5.75	5.01	6.49	0.37	0.74		


SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	48	39	57	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	51	40	62	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	13.3	10.5	16.1	1.40	2.80	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.778	0.614	0.942	0.08	0.16	
Bilirubin Total	µmol/l	30.6	24.1	37.1	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.41	2.17	0.19	0.38	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Chloride	mmol/l	95.8	88.1	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	124	99.5	149	12.25	24.50	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	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	
gamma-GT	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Hexokinase
	mg/dl	113	95.7	130	8.65	17.30	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	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	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	3.91	3.59	4.23	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	74.9	104	7.25	14.50	

**SIEMENS DIMENSION RxL/Max/Xpand®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1401UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.5	106	7.35	14.70	
Urea	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
Uric Acid (Urate)	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.75	5.01	6.49	0.37	0.74	