

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1080UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
gamma-GT	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	117	161	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	92	126	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	186	158	214	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	147	125	169	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	115	97	133	9.00	18.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	6.42	5.90	6.94	0.26	0.52	ISE method - indirect
Protein Total	g/l	46.1	36.9	55.3	4.60	9.20	Biuret reaction end point
	g/dl	4.61	3.69	5.53	0.46	0.92	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	265	222	308	21.50	43.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	

**HITACHI SERIES®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1080UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1080UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
Alkaline Phosphatase	U/l	518	440	596	39.00	78.00	Diethanolamine buffer DEA 37°C
	U/l	404	343	465	30.50	61.00	Diethanolamine buffer DEA 30°C
	U/l	331	281	381	25.00	50.00	Diethanolamine buffer DEA 25°C
	U/l	325	276	374	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	253	215	291	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	208	176	240	16.00	32.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	157	126	188	15.50	31.00	Tris buffer without P5P 37°C
	U/l	116	93	139	11.50	23.00	Tris buffer without P5P 30°C
	U/l	88	71	105	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	161	129	193	16.00	32.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	47.6	38.1	57.1	4.75	9.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Nitrobenzenediazonium salt
	mg/dl	5.10	4.02	6.18	0.54	1.08	
Calcium	mmol/l	3.24	2.92	3.56	0.16	0.32	Arsenazo III
	mg/dl	13.0	11.7	14.3	0.65	1.30	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	120	110	130	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.15	6.22	8.08	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
CK Total	U/l	519	425	613	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	325	266	384	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	382	306	458	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	394	315	473	39.50	79.00	Creatinine PAP method
	mg/dl	4.45	3.56	5.34	0.45	0.89	
gamma-GT	U/l	170	145	195	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	114	154	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.89	2.46	3.32	0.22	0.43	Direct HDL PEGME
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	2.71	2.30	3.12	0.21	0.41	Direct Clearance Method
	mg/dl	105	88.8	121	8.10	16.20	
Iron	µmol/l	38.0	31.1	44.9	3.45	6.90	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
LD (LDH)	U/l	738	627	849	55.50	111.00	P->L SFBC 37°C
	U/l	533	453	613	40.00	80.00	P->L SFBC 30°C
	U/l	374	318	430	28.00	56.00	P->L SFBC 25°C

Konelab 20/30/60®/Thermo Scientific Indiko Plus				ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)			
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Size 20 x 5ml / 5 x 5ml		Expiry 2023-02-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Xylidyl Blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - direct
Protein Total	g/l	46.3	37.1	55.5	4.60	9.20	Biuret reaction end point
	g/dl	4.63	3.71	5.55	0.46	0.92	
Sodium	mmol/l	156	149	163	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	223	309	21.50	43.00	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.11	10.6	0.62	1.23	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	8.33	10.8	0.63	1.25	

MEAN OF ALL INSTRUMENTS

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Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	410	324	496	43.00	86.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	310	245	375	32.50	65.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	232	183	281	24.50	49.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	31.5	21.1	41.9	5.20	10.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	31.5	26.7	36.3	2.40	4.80	Bromocresol Green
	g/dl	3.15	2.67	3.63	0.24	0.48	
	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Purple
	g/dl	3.03	2.58	3.48	0.23	0.45	
	g/l	29.3	24.9	33.7	2.20	4.40	Ortho Vitros Microslide Systems
	g/dl	2.93	2.49	3.37	0.22	0.44	
	g/l	28.6	24.3	32.9	2.15	4.30	Turbidimetric Assays
Alkaline Phosphatase	g/dl	2.86	2.43	3.29	0.22	0.43	
	U/l	259	220	298	19.50	39.00	Ortho Vitros Microslide Systems 37°C
	U/l	506	430	582	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	394	335	453	29.50	59.00	Diethanolamine buffer DEA 30°C
	U/l	323	275	371	24.00	48.00	Diethanolamine buffer DEA 25°C
	U/l	354	301	407	26.50	53.00	AMP optimised to IFCC 37°C
	U/l	276	234	318	21.00	42.00	AMP optimised to IFCC 30°C
	U/l	226	192	260	17.00	34.00	AMP optimised to IFCC 25°C
	U/l	341	290	392	25.50	51.00	AMP non-optimised 37°C
U/l	266	226	306	20.00	40.00	AMP non-optimised 30°C	
U/l	218	185	251	16.50	33.00	AMP non-optimised 25°C	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	156	125	187	15.50	31.00	Ortho Vitros Microslide Systems 37°C
	U/l	150	120	180	15.00	30.00	Tris buffer with P5P 37°C
	U/l	111	89	133	11.00	22.00	Tris buffer with P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer with P5P 25°C
	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer without P5P 30°C
	U/l	79	64	94	7.50	15.00	Tris buffer without P5P 25°C
	U/l	132	105	159	13.50	27.00	Tris buffer SCE 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer SCE 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	258	219	297	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	255	217	293	19.00	38.00	Roche EPS Liquid 37°C
	U/l	301	256	346	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	305	260	350	22.50	45.00	pNP Maltotriose substrates 37°C
	U/l	294	250	338	22.00	44.00	Siemens - blocked pNPG7 37°C
	U/l	238	202	274	18.00	36.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	311	264	358	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	275	234	316	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	267	227	307	20.00	40.00	Saccharogenic 37°C
	U/l	284	241	327	21.50	43.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	187	159	215	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	277	236	318	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	348	296	400	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
	U/l	295	251	339	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C

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Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	301	256	346	22.50	45.00	Beckman Synchron AMY7 37°C
	U/l	326	277	375	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	362	308	416	27.00	54.00	Abbott Architect IFCC Cal. 37°C
	U/l	291	247	335	22.00	44.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.16	0.95	1.37	0.10	0.21	Immunoturbidimetric
	mg/dl	116	95.1	137	10.45	20.90	
Apolipoprotein B	g/l	0.54	0.44	0.63	0.05	0.10	Immunoturbidimetric
	mg/dl	53.7	44.0	63.4	4.85	9.70	
AST (GOT)	U/l	188	151	225	18.50	37.00	Ortho Vitros Microslide visible slide 37°C
	U/l	189	151	227	19.00	38.00	Tris buffer with P5P 37°C
	U/l	128	102	154	13.00	26.00	Tris buffer with P5P 30°C
	U/l	90	72	108	9.00	18.00	Tris buffer with P5P 25°C
	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
	U/l	133	107	159	13.00	26.00	Tris buffer SCE 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer SCE 30°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Colorimetric
	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems
	mmol/l	14.2	11.3	17.1	1.45	2.90	Differential rate pH change
	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
	mmol/l	13.9	11.0	16.8	1.45	2.90	Ion selective electrode
Bile Acids	µmol/l	49.6	39.7	59.5	4.95	9.90	4th Generation Colorimetric
	µmol/l	46.7	37.4	56.0	4.65	9.30	5th Generation Colorimetric

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Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Direct	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Sulphanilic Acid	
	mg/dl	1.63	1.29	1.97	0.17	0.34		
	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.55	1.22	1.88	0.17	0.33		
	µmol/l	30.0	23.7	36.3	3.15	6.30	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.76	1.39	2.13	0.19	0.37		
	µmol/l	30.0	23.7	36.3	3.15	6.30	Modified Jendrassik	
	mg/dl	1.76	1.39	2.13	0.19	0.37		
	Bilirubin Total	µmol/l	80.5	63.6	97.4	8.45	16.90	Vitros 250/500/700/950 Total Bilirubin
		mg/dl	4.71	3.72	5.70	0.50	0.99	
µmol/l		91.0	71.9	110	9.55	19.10	Diazo with Dichloroaniline (DCA)	
mg/dl		5.32	4.21	6.43	0.56	1.11		
µmol/l		86.7	68.5	105	9.10	18.20	Diazo with Sulphanilic Acid	
mg/dl		5.07	4.01	6.13	0.53	1.06		
µmol/l		81.6	64.5	98.7	8.55	17.10	Dichlorophenyl Diazonium (DPD)	
mg/dl		4.77	3.77	5.77	0.50	1.00		
µmol/l		87.1	68.8	105	9.15	18.30	Nitrobenzenediazonium salt	
mg/dl		5.10	4.02	6.18	0.54	1.08		
µmol/l		83.9	66.2	102	8.85	17.70	Diazonium ion	
mg/dl		4.91	3.87	5.95	0.52	1.04		
µmol/l		98.2	77.6	119	10.30	20.60	Oxidation to Biliverdin/Vanadate	
mg/dl		5.74	4.54	6.94	0.60	1.20		
µmol/l	96.9	76.6	117	10.15	20.30	Modified Jendrassik		
mg/dl	5.67	4.48	6.86	0.60	1.19			
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone	
	mg/dl	12.4	11.2	13.6	0.60	1.20		



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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.12	2.80	3.44	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.00	2.70	3.30	0.15	0.30	Ion selective electrode
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.11	2.79	3.43	0.16	0.32	NM-BAPTA
	mg/dl	12.5	11.2	13.8	0.65	1.30	
mmol/l	1.17	1.05	1.29	0.06	0.12	Ionised calcium	
mg/dl	4.69	4.21	5.17	0.24	0.48		
Chloride	mmol/l	118	109	127	4.50	9.00	Colorimetric
	mmol/l	121	111	131	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	119	110	128	4.50	9.00	ISE indirect
	mmol/l	119	109	129	5.00	10.00	ISE direct
Cholesterol	mmol/l	6.74	5.86	7.62	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
	mmol/l	7.11	6.19	8.03	0.46	0.92	Cholesterol Oxidase
mg/dl	274	239	309	17.50	35.00		
Cholinesterase	U/l	4967	3974	5960	496.50	993.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	420	345	495	37.50	75.00	Ortho Vitros Microslide Systems 37°C
	U/l	513	421	605	46.00	92.00	CK-NAC serum start (DGKC) 37°C
	U/l	321	264	378	28.50	57.00	CK-NAC serum start (DGKC) 30°C
	U/l	218	179	257	19.50	39.00	CK-NAC serum start (DGKC) 25°C
	U/l	491	403	579	44.00	88.00	CK-NAC substrate start (DGKC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	209	171	247	19.00	38.00	CK-NAC substrate start (DGKC) 25°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	494	405	583	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	309	254	364	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 25°C
	U/l	533	437	629	48.00	96.00	Monothioglycerol 37°C
	U/l	334	274	394	30.00	60.00	Monothioglycerol 30°C
	U/l	227	186	268	20.50	41.00	Monothioglycerol 25°C
Copper	µmol/l	27.6	22.1	33.1	2.75	5.50	Atomic absorption
	µg/dl	176	141	211	17.50	35.00	
	µmol/l	26.5	21.2	31.8	2.65	5.30	Colorimetric
	µg/dl	169	135	203	17.00	34.00	
Cortisol	nmol/l	1073	805	1341	134.00	268.00	Roche Cobas E411
	µg/dl	38.6	29.0	48.2	4.80	9.60	
Creatinine	µmol/l	369	295	443	37.00	74.00	Alkaline picrate with deproteinization
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	387	309	465	39.00	78.00	Enzymatic UV method
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	390	312	468	39.00	78.00	Creatinine PAP method
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	379	303	455	38.00	76.00	Jaffe rate blanked
	mg/dl	4.28	3.42	5.14	0.43	0.86	
	µmol/l	385	308	462	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.35	3.48	5.22	0.44	0.87	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	391	313	469	39.00	78.00	Vitros IDMS Traceable
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	382	305	459	38.50	77.00	IDMS traceable
	mg/dl	4.32	3.45	5.19	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.21	1.03	1.39	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	4.03	3.22	4.84	0.41	0.81	Immunoturbidimetric
	ng/ml	3.15	2.51	3.79	0.32	0.64	
Folate	nmol/l	14.5	11.0	18.0	1.75	3.50	Roche Cobas E411
	ng/ml	6.39	4.85	7.93	0.77	1.54	
Free T4	pmol/l	55.0	41.2	68.8	6.90	13.80	Abbott Architect
	ng/dl	4.29	3.21	5.37	0.54	1.08	
	pg/ml	42.9	32.1	53.7	5.40	10.80	Abbott Architect
	pmol/l	77.3	58.0	96.6	9.65	19.30	Siemens Centaur XP/XPT/Classic
	ng/dl	6.03	4.52	7.54	0.76	1.51	
	pg/ml	60.3	45.2	75.4	7.55	15.10	Siemens Centaur XP/XPT/Classic
	pmol/l	62.1	46.6	77.6	7.75	15.50	Beckman Access
	ng/dl	4.84	3.63	6.05	0.61	1.21	
	pg/ml	48.4	36.3	60.5	6.05	12.10	Beckman Access
	pmol/l	63.3	47.4	79.2	7.95	15.90	Beckman Dxl800
	ng/dl	4.94	3.70	6.18	0.62	1.24	
	pg/ml	49.4	37.0	61.8	6.20	12.40	Beckman Dxl800
	pmol/l	72.4	54.3	90.5	9.05	18.10	Siemens Immulite 2000/2500
ng/dl	5.65	4.24	7.06	0.71	1.41		
pg/ml	56.5	42.4	70.6	7.05	14.10	Siemens Immulite 2000/2500	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	89.8	67.3	112	11.25	22.50	Vitros ECi
	ng/dl	7.00	5.25	8.75	0.88	1.75	
	pg/ml	70.0	52.5	87.5	8.75	17.50	Vitros ECi
	pmol/l	97.3	73.0	122	12.15	24.30	Roche Elecsys
	ng/dl	7.59	5.69	9.49	0.95	1.90	
	pg/ml	75.9	56.9	94.9	9.50	19.00	Roche Elecsys
	pmol/l	94.9	71.1	119	11.90	23.80	Roche Cobas E411
	ng/dl	7.40	5.55	9.25	0.93	1.85	
	pg/ml	74.0	55.5	92.5	9.25	18.50	Roche Cobas E411
	pmol/l	93.8	70.4	117	11.70	23.40	Roche Cobas 6000/8000
	ng/dl	7.32	5.49	9.15	0.92	1.83	
	pg/ml	73.2	54.9	91.5	9.15	18.30	Roche Cobas 6000/8000
	pmol/l	88.2	66.2	110	11.00	22.00	Biomerieux Vidas FT4N Kit
	ng/dl	6.88	5.16	8.60	0.86	1.72	
pg/ml	68.8	51.6	86.0	8.60	17.20	Biomerieux Vidas FT4N Kit	
Gentamicin	µmol/l	18.9	15.1	22.6	1.88	3.75	Immunoturbidimetric
	µg/ml	9.01	7.22	10.8	0.90	1.79	
gamma-GT	U/l	165	141	189	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	111	149	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	205	174	236	15.50	31.00	Ortho Vitros Microslide Systems 37°C
	U/l	139	118	160	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	86	73	99	6.50	13.00	Gamma glutamyl-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	186	158	214	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	147	125	169	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	115	97	133	9.00	18.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	37	29	45	4.00	8.00	Triethanolamine buffer 50 mmol 37°C
	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	23	18	28	2.50	5.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.0	12.7	17.3	1.15	2.30	Oxygen electrode
	mg/dl	270	229	311	20.50	41.00	
mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase	
mg/dl	278	236	320	21.00	42.00		
HDL - Cholesterol	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct HDL PPD
	mg/dl	105	89.2	121	7.90	15.80	
	mmol/l	2.71	2.30	3.12	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	105	88.8	121	8.10	16.20	
	mmol/l	2.47	2.10	2.84	0.19	0.37	Vitros Magnetic HDL
	mg/dl	95.3	81.1	110	7.10	14.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.91	2.47	3.35	0.22	0.44	Direct HDL PEGME
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	2.57	2.18	2.96	0.20	0.39	Direct Clearance Method
	mg/dl	99.2	84.1	114	7.55	15.10	
	mmol/l	2.41	2.05	2.77	0.18	0.36	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	93.0	79.1	107	6.95	13.90	
	mmol/l	3.52	2.99	4.05	0.27	0.53	Direct HDL Roche 3rd generation
	mg/dl	136	115	157	10.50	21.00	
mmol/l	2.61	2.22	3.00	0.20	0.39	HDL - Ultra	
mg/dl	101	85.7	116	7.65	15.30		
mmol/l	3.52	2.99	4.05	0.27	0.53	Direct HDL Roche 4th Generation	
mg/dl	136	115	157	10.50	21.00		
Immunoglobulin A	g/l	1.52	1.14	1.90	0.19	0.38	Immunoturbidimetric
	mg/dl	152	114	190	19.00	38.00	
Immunoglobulin G	g/l	6.37	5.22	7.52	0.58	1.15	Immunoturbidimetric
	mg/dl	637	522	752	57.50	115.00	
Immunoglobulin M	g/l	0.68	0.55	0.82	0.07	0.14	Immunoturbidimetric
	mg/dl	68.2	54.6	81.8	6.80	13.60	
Iron	μmol/l	39.0	31.9	46.1	3.55	7.10	Colorimetric with ppt.
	μg/dl	218	178	258	20.00	40.00	
	μmol/l	39.0	32.0	46.0	3.50	7.00	Colorimetric without ppt.
	μg/dl	218	179	257	19.50	39.00	
	μmol/l	38.8	31.8	45.8	3.50	7.00	Ortho Vitros Microslide Systems
	μg/dl	217	178	256	19.50	39.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.26	4.31	6.21	0.48	0.95	Ion selective electrode
	mg/dl	47.4	38.8	56.0	4.30	8.60	
	mmol/l	5.46	4.48	6.44	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.2	40.4	58.0	4.40	8.80	
	mmol/l	5.12	4.20	6.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	46.1	37.8	54.4	4.15	8.30	
	mmol/l	5.37	4.41	6.33	0.48	0.96	Enzymatic Electrode
	mg/dl	48.4	39.7	57.1	4.35	8.70	
mmol/l	5.28	4.33	6.23	0.48	0.95	UV LDH	
mg/dl	47.6	39.0	56.2	4.30	8.60		
LAP	U/l	18	15	21	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	329	280	378	24.50	49.00	L->P 37°C
	U/l	238	202	274	18.00	36.00	L->P 30°C
	U/l	167	142	192	12.50	25.00	L->P 25°C
	U/l	799	679	919	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	577	490	664	43.50	87.00	P->L Scandinavian & Dutch 30°C
	U/l	405	344	466	30.50	61.00	P->L Scandinavian & Dutch 25°C
	U/l	706	600	812	53.00	106.00	P->L German methods 37°C
	U/l	510	433	587	38.50	77.00	P->L German methods 30°C
	U/l	358	304	412	27.00	54.00	P->L German methods 25°C
	U/l	717	609	825	54.00	108.00	P->L SFBC 37°C
	U/l	518	440	596	39.00	78.00	P->L SFBC 30°C
	U/l	364	309	419	27.50	55.00	P->L SFBC 25°C
	U/l	370	315	425	27.50	55.00	L->P IFCC 37°C
	U/l	267	227	307	20.00	40.00	L->P IFCC 30°C
U/l	188	160	216	14.00	28.00	L->P IFCC 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	704	564	844	70.00	140.00	Ortho Vitros Microslide Systems 37°C
	U/l	53	42	64	5.50	11.00	Roche Colorimetric 37°C
	U/l	85	68	102	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.17	1.91	2.43	0.13	0.26	Ion selective electrode
	mg/dl	1.51	1.33	1.69	0.09	0.18	
	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.26	1.62	0.09	0.18	
	mmol/l	2.15	1.89	2.41	0.13	0.26	Randox Colorimetric
Magnesium	mmol/l	1.79	1.57	2.01	0.11	0.22	Arsenazo III
	mg/dl	4.35	3.82	4.88	0.27	0.53	
	mmol/l	1.85	1.63	2.07	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.96	5.04	0.27	0.54	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Calmagite
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.79	1.57	2.01	0.11	0.22	Xylidyl Blue
	mg/dl	4.35	3.82	4.88	0.27	0.53	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.79	1.58	2.00	0.11	0.21	Chlorphosponazo III
	mg/dl	4.35	3.84	4.86	0.26	0.51	
	mmol/l	1.79	1.57	2.01	0.11	0.22	Enzymatic
	mg/dl	4.35	3.82	4.88	0.27	0.53	
NEFA	mmol/l	0.62	0.52	0.71	0.05	0.09	Colorimetric

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	352	281	423	35.50	71.00	Calculated
	mOsm/kg	379	303	455	38.00	76.00	Freezing point depression
Paracetamol	mmol/l	0.62	0.50	0.74	0.06	0.12	Colorimetric
	mg/l	93.8	75.0	113	9.40	18.80	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	mmol/l	2.23	1.90	2.56	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.91	5.89	7.93	0.51	1.02	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
Potassium	mmol/l	6.32	5.82	6.82	0.25	0.50	Ortho Vitros Microslide Systems
	mmol/l	6.55	6.03	7.07	0.26	0.52	Enzymatic
	mmol/l	6.31	5.81	6.81	0.25	0.50	ISE method - direct
	mmol/l	6.38	5.87	6.89	0.26	0.51	ISE method - indirect
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.73	3.78	5.68	0.48	0.95	
	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
	g/l	45.5	36.4	54.6	4.55	9.10	Biuret reaction kinetic
PSA Total	ng/ml =	37.7	28.3	47.1	4.70	9.40	Beckman Access standardised to Hybritech
	ng/ml =	30.4	22.8	38.0	3.80	7.60	bioMerieux VIDAS TPSA
	ng/ml =	30.6	22.9	38.3	3.85	7.70	Siemens Centaur XP/XPT/Classic
	ng/ml =	25.3	19.0	31.6	3.15	6.30	Abbott Architect
	ng/ml =	35.5	26.7	44.3	4.40	8.80	Cobas E411

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	33.7	25.2	42.2	4.25	8.50	Roche Cobas 6000/8000
Salicylate	mmol/l	0.87	0.70	1.04	0.09	0.17	Gravimetric
	mg/dl	12.0	9.59	14.4	1.21	2.41	
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	155	147	163	4.00	8.00	Enzymatic
	mmol/l	158	150	166	4.00	8.00	ISE method - direct
	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	139	111	167	14.00	28.00	Gravimetric
	µg/ml	25.0	20.0	30.0	2.50	5.00	
Thyroid Stimulating Hormone	µU/ml =	0.82	0.66	0.99	0.08	0.16	Abbott Architect
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Siemens Centaur XP/XPT/Classic
	µU/ml =	0.96	0.77	1.16	0.10	0.19	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.02	0.81	1.23	0.10	0.21	bioMerieux VIDAS TSH
	µU/ml =	1.06	0.85	1.27	0.11	0.21	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.02	0.82	1.22	0.10	0.20	Siemens Immulite 2000/2500
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Roche Cobas E411
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Roche Cobas Core EIA
	µU/ml =	1.18	0.94	1.42	0.12	0.24	Roche Cobas 6000/8000
	µU/ml =	0.96	0.77	1.15	0.10	0.19	Beckman Dxl800 Hyper TSH
	µU/ml =	0.91	0.73	1.10	0.09	0.18	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	0.92	0.74	1.10	0.09	0.18	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	37.8	29.9	45.7	3.95	7.90	Removal of excess free iron
	µg/dl	211	167	255	22.00	44.00	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	41.8	33.0	50.6	4.40	8.80	Direct Colorimetric
	µg/dl	234	184	284	25.00	50.00	
	µmol/l	40.6	32.0	49.2	4.30	8.60	Calculated from Transferrin
	µg/dl	227	179	275	24.00	48.00	
Tobramycin	µmol/l	45.3	35.8	54.8	4.75	9.50	Randox Direct
	µg/dl	253	200	306	26.50	53.00	
Total T3	µmol/l	15.6	12.5	18.7	1.55	3.10	Gravimetric
	µg/ml	7.30	5.85	8.75	0.73	1.45	
Total T3	nmol/l	2.97	2.23	3.71	0.37	0.74	Abbott Architect
	ng/ml	1.93	1.45	2.41	0.24	0.48	
	ng/dl	193	145	241	24.00	48.00	Abbott Architect
	nmol/l	3.36	2.52	4.20	0.42	0.84	Beckman Access
	ng/ml	2.19	1.64	2.74	0.28	0.55	
	ng/dl	219	164	274	27.50	55.00	Beckman Access
	nmol/l	4.19	3.14	5.24	0.53	1.05	Siemens Centaur XP/XPT/Classic
	ng/ml	2.73	2.04	3.42	0.35	0.69	
	ng/dl	273	204	342	34.50	69.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.89	2.91	4.87	0.49	0.98	Roche Cobas E411
	ng/ml	2.53	1.89	3.17	0.32	0.64	
	ng/dl	253	189	317	32.00	64.00	Roche Cobas E411
	nmol/l	3.92	2.94	4.90	0.49	0.98	Roche Cobas 6000/8000
	ng/ml	2.55	1.91	3.19	0.32	0.64	
ng/dl	255	191	319	32.00	64.00	Roche Cobas 6000/8000	
Total T4	nmol/l	250	188	312	31.00	62.00	Abbott Architect
	µg/dl	19.5	14.7	24.3	2.40	4.80	
	ng/ml	195	147	243	24.00	48.00	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	239	179	299	30.00	60.00	Siemens Centaur XP/XPT/Classic
	µg/dl	18.6	14.0	23.2	2.30	4.60	
	ng/ml	186	140	232	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	201	151	251	25.00	50.00	Roche Cobas E411
	µg/dl	15.7	11.8	19.6	1.95	3.90	
	ng/ml	157	118	196	19.50	39.00	Roche Cobas E411
	nmol/l	201	151	251	25.00	50.00	Roche Cobas 6000/8000
	µg/dl	15.7	11.8	19.6	1.95	3.90	
	ng/ml	157	118	196	19.50	39.00	Roche Cobas 6000/8000
	nmol/l	197	148	246	24.50	49.00	Microgenics DRI assay
µg/dl	15.4	11.5	19.3	1.95	3.90		
ng/ml	154	115	193	19.50	39.00	Microgenics DRI assay	
Transferrin	g/l	1.72	1.38	2.06	0.17	0.34	Immunoturbidimetric
	mg/dl	172	138	206	17.00	34.00	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	263	220	306	21.50	43.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	3.22	2.70	3.74	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	285	239	331	23.00	46.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
UIBC	µmol/l	2.80	2.30	3.30	0.25	0.50	TIBC - FE
	µg/dl	15.7	12.9	18.5	1.40	2.80	
Urea	mmol/l	17.9	15.3	20.5	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease end point
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.5	16.5	22.5	1.50	3.00	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
mmol/l	19.5	16.6	22.4	1.45	2.90	BUN	
mg/dl	54.7	46.5	62.9	4.10	8.20		
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.77	7.63	9.91	0.57	1.14	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.21	8.01	10.4	0.60	1.20	
mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	9.21	8.01	10.4	0.60	1.20		
Vitamin B12	pmol/l	257	206	308	25.50	51.00	Roche Cobas E411
	pg/ml	348	279	417	34.50	69.00	
Zinc	µmol/l	35.6	28.5	42.7	3.55	7.10	Colorimetric with deproteinisation
	µg/dl	232	186	278	23.00	46.00	

**MEAN OF ALL INSTRUMENTS (Elec.)**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		58.3	52.5	64.1	2.90	5.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		7.2	5.5	8.9	0.87	1.73	% of total Protein (Beckman Capillary)
alpha-2-globulin		11.1	8.4	13.8	1.33	2.66	% of total Protein (Beckman Capillary)
beta-globulin		12.3	9.4	15.3	1.48	2.95	% of total Protein (Beckman Capillary)
gamma-globulin		11.1	8.4	13.8	1.33	2.66	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	32.2	27.3	37.1	2.45	4.90	Bromocresol Green
	g/dl	3.22	2.73	3.71	0.25	0.49	
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	87	133	11.50	23.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.8	70.1	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.19	4.10	6.28	0.55	1.09	
	µmol/l	96.1	75.9	116	10.10	20.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.62	4.44	6.80	0.59	1.18	
	µmol/l	96.5	76.2	117	10.15	20.30	Oxidation to Biliverdin/Vanadate
	mg/dl	5.65	4.46	6.84	0.60	1.19	
Calcium	mmol/l	3.23	2.91	3.55	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Cholesterol	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
CK Total	U/l	534	438	630	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	334	274	394	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	364	292	436	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.11	3.30	4.92	0.41	0.81	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.55	2.16	2.94	0.20	0.39	Direct Clearance Method
	mg/dl	98.4	83.4	113	7.50	15.00	
Iron	µmol/l	39.1	32.0	46.2	3.55	7.10	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
LD (LDH)	U/l	771	655	887	58.00	116.00	P->L German methods 37°C
	U/l	557	473	641	42.00	84.00	P->L German methods 30°C
	U/l	391	332	450	29.50	59.00	P->L German methods 25°C
	U/l	725	616	834	54.50	109.00	P->L SFBC 37°C
	U/l	523	445	601	39.00	78.00	P->L SFBC 30°C
	U/l	368	312	424	28.00	56.00	P->L SFBC 25°C
	U/l	378	321	435	28.50	57.00	L->P IFCC 37°C
	U/l	273	232	314	20.50	41.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C
Magnesium	mmol/l	1.62	1.42	1.82	0.10	0.20	Xylidyl Blue
	mg/dl	3.94	3.45	4.43	0.25	0.49	
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	

**MINDRAY BS-200/300/400**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	48.0	38.4	57.6	4.80	9.60	Biuret reaction end point
	g/dl	4.80	3.84	5.76	0.48	0.96	
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.92	7.76	10.1	0.58	1.16	

**Ortho VITROS®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Ortho Vitros Microslide Systems
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	259	220	298	19.50	39.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	187	159	215	14.00	28.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	188	151	225	18.50	37.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	80.5	63.6	97.4	8.45	16.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.71	3.72	5.70	0.50	0.99	
Bilirubin, Unconjugated Vitros BU	µmol/l	80.5	63.6	97.4	8.45	16.90	BuBc Vitros Slide
	mg/dl	4.71	3.72	5.70	0.50	0.99	
Calcium	mmol/l	3.12	2.80	3.44	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	121	111	131	5.00	10.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	6.74	5.86	7.62	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
CK Total	U/l	420	345	495	37.50	75.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	391	313	469	39.00	78.00	Vitros IDMS Traceable
	mg/dl	4.42	3.54	5.30	0.44	0.88	
gamma-GT	U/l	205	174	236	15.50	31.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	Vitros Magnetic HDL
	mg/dl	95.3	81.1	110	7.10	14.20	
	mmol/l	2.41	2.05	2.77	0.18	0.36	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	93.0	79.1	107	6.95	13.90	
Iron	µmol/l	38.8	31.8	45.8	3.50	7.00	Ortho Vitros Microslide Systems
	µg/dl	217	178	256	19.50	39.00	
Lactate	mmol/l	5.12	4.20	6.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	46.1	37.8	54.4	4.15	8.30	
Lipase	U/l	704	564	844	70.00	140.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	1.85	1.63	2.07	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.96	5.04	0.27	0.54	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.32	5.82	6.82	0.25	0.50	Ortho Vitros Microslide Systems
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.73	3.78	5.68	0.48	0.95	
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
Triglycerides	mmol/l	3.22	2.70	3.74	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	285	239	331	23.00	46.00	
Urea	mmol/l	17.9	15.3	20.5	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.77	7.63	9.91	0.57	1.14	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.20	6.27	8.13	0.47	0.93	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
CK Total	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	330	270	390	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	355	284	426	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.01	3.21	4.81	0.40	0.80	
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.99	7.83	10.2	0.58	1.16	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	32.5	27.6	37.4	2.45	4.90	Bromocresol Green
	g/dl	3.25	2.76	3.74	0.25	0.49	
	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Purple
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	28.2	23.9	32.5	2.15	4.30	Turbidimetric Assays
	g/dl	2.82	2.39	3.25	0.22	0.43	
Alkaline Phosphatase	U/l	283	241	325	21.00	42.00	Roche Integra AMP buffer 37°C
	U/l	220	188	252	16.00	32.00	Roche Integra AMP buffer 30°C
	U/l	181	154	208	13.50	27.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	138	111	165	13.50	27.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	254	216	292	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	275	233	317	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Colorimetric
	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bile Acids	µmol/l	46.9	37.6	56.2	4.65	9.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	29.2	23.0	35.4	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	29.2	23.1	35.3	3.05	6.10	Roche JG factored
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Bilirubin Total	µmol/l	82.4	65.1	99.7	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.82	3.81	5.83	0.51	1.01	
	µmol/l	82.6	65.3	99.9	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.83	3.82	5.84	0.51	1.01	
	µmol/l	82.2	65.0	99.4	8.60	17.20	Diazonium ion
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.10	2.79	3.41	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.91	6.01	7.81	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	232	302	17.50	35.00	
Cholinesterase	U/l	5035	4028	6042	503.50	1007.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	486	399	573	43.50	87.00	CK-NAC substrate start (DGKC) 37°C
	U/l	304	250	358	27.00	54.00	CK-NAC substrate start (DGKC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	482	395	569	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	302	247	357	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	393	315	471	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	388	311	465	38.50	77.00	Enzymatic UV method
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	393	314	472	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	396	317	475	39.50	79.00	Jaffe rate blanked
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	394	315	473	39.50	79.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.45	3.56	5.34	0.45	0.89	
D-3-Hydroxybutyrate	mmol/l	1.22	1.04	1.40	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	93.8	70.4	117	11.70	23.40	Roche Cobas 6000/8000
	ng/dl	7.32	5.49	9.15	0.92	1.83	
	pg/ml	73.2	54.9	91.5	9.15	18.30	Roche Cobas 6000/8000
gamma-GT	U/l	154	131	177	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	103	139	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	95	81	109	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	151	203	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	119	159	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	35	28	42	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	27	22	32	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose dehydrogenase	
	mg/dl	278	236	320	21.00	42.00		
	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase	
	mg/dl	279	238	320	20.50	41.00		
HDL - Cholesterol	mmol/l	3.45	2.93	3.97	0.26	0.52	Direct HDL PEGME	
	mg/dl	133	113	153	10.00	20.00		
	mmol/l	3.43	2.92	3.94	0.26	0.51	Direct HDL Roche 3rd generation	
	mg/dl	132	113	151	9.50	19.00		
Iron	mmol/l	3.52	2.99	4.05	0.27	0.53	Direct HDL Roche 4th Generation	
	mg/dl	136	115	157	10.50	21.00		
	Iron	µmol/l	38.7	31.8	45.6	3.45	6.90	Colorimetric with ppt.
		µg/dl	216	178	254	19.00	38.00	
µmol/l		39.2	32.2	46.2	3.50	7.00	Colorimetric without ppt.	
µg/dl		219	180	258	19.50	39.00		
Lactate	mmol/l	5.46	4.47	6.45	0.50	0.99	Colorimetric Lactate Oxidase	
	mg/dl	49.2	40.3	58.1	4.45	8.90		
LD (LDH)	U/l	356	302	410	27.00	54.00	L->P 37°C	
	U/l	257	218	296	19.50	39.00	L->P 30°C	
	U/l	180	153	207	13.50	27.00	L->P 25°C	
	U/l	692	588	796	52.00	104.00	P->L German methods 37°C	
	U/l	500	425	575	37.50	75.00	P->L German methods 30°C	
	U/l	351	298	404	26.50	53.00	P->L German methods 25°C	
	U/l	371	315	427	28.00	56.00	L->P IFCC 37°C	
	U/l	268	227	309	20.50	41.00	L->P IFCC 30°C	
	U/l	188	160	216	14.00	28.00	L->P IFCC 25°C	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	52	41	63	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.79	1.57	2.01	0.11	0.22	Xylidyl Blue
	mg/dl	4.35	3.82	4.88	0.27	0.53	
	mmol/l	1.78	1.57	1.99	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Osmolality	mOsm/kg	351	281	421	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	6.44	5.92	6.96	0.26	0.52	ISE method - indirect
Protein Total	g/l	46.2	36.9	55.5	4.65	9.30	Biuret reaction end point
	g/dl	4.62	3.69	5.55	0.47	0.93	
	g/l	46.1	36.9	55.3	4.60	9.20	Biuret reaction kinetic
	g/dl	4.61	3.69	5.53	0.46	0.92	
PSA Total	ng/ml =	33.7	25.2	42.2	4.25	8.50	Roche Cobas 6000/8000
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.18	0.94	1.42	0.12	0.24	Roche Cobas 6000/8000
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	43.5	34.4	52.6	4.55	9.10	Calculated from Transferrin
	µg/dl	243	192	294	25.50	51.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	3.92	2.94	4.90	0.49	0.98	Roche Cobas 6000/8000
	ng/ml	2.55	1.91	3.19	0.32	0.64	
	ng/dl	255	191	319	32.00	64.00	Roche Cobas 6000/8000
Total T4	nmol/l	201	151	251	25.00	50.00	Roche Cobas 6000/8000
	µg/dl	15.7	11.8	19.6	1.95	3.90	
	ng/ml	157	118	196	19.50	39.00	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	263	220	306	21.50	43.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease end point
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
mg/dl	54.2	46.1	62.3	4.05	8.10		
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.90	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.02	7.85	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	31.8	27.0	36.6	2.40	4.80	Bromocresol Green
	g/dl	3.18	2.70	3.66	0.24	0.48	
Alkaline Phosphatase	U/l	292	248	336	22.00	44.00	Roche Integra AMP buffer 37°C
	U/l	227	193	261	17.00	34.00	Roche Integra AMP buffer 30°C
	U/l	187	158	216	14.50	29.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	285	243	327	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	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	
Bilirubin Total	µmol/l	77.4	61.1	93.7	8.15	16.30	Diazo with Sulphanilic Acid
	mg/dl	4.53	3.57	5.49	0.48	0.96	
	µmol/l	80.4	63.5	97.3	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.70	3.71	5.69	0.50	0.99	
	µmol/l	78.8	62.3	95.3	8.25	16.50	Diazonium ion
mg/dl	4.61	3.64	5.58	0.49	0.97		

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	122	113	131	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.99	6.08	7.90	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
CK Total	U/l	481	394	568	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	301	247	355	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	377	301	453	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.26	3.40	5.12	0.43	0.86	
	µmol/l	378	302	454	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	374	300	448	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.23	3.39	5.07	0.42	0.84	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	132	112	152	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	103	88	118	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	3.55	3.02	4.08	0.27	0.53	Direct HDL Roche 3rd generation
	mg/dl	137	117	157	10.00	20.00	
	mmol/l	3.58	3.05	4.11	0.27	0.53	Direct HDL Roche 4th Generation
	mg/dl	138	118	158	10.00	20.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	381	324	438	28.50	57.00	L->P IFCC 37°C
	U/l	275	234	316	20.50	41.00	L->P IFCC 30°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 25°C
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.37	3.86	4.88	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.04	5.98	8.10	0.53	1.06	
	mmol/l	2.30	1.96	2.64	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.13	6.08	8.18	0.53	1.05	
Potassium	mmol/l	6.42	5.91	6.93	0.26	0.51	ISE method - indirect
Protein Total	g/l	48.4	38.7	58.1	4.85	9.70	Biuret reaction end point
	g/dl	4.84	3.87	5.81	0.49	0.97	
Sodium	mmol/l	158	151	165	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	264	221	307	21.50	43.00	
Urea	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.16	7.98	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	32.2	27.3	37.1	2.45	4.90	Bromocresol Green
	g/dl	3.22	2.73	3.71	0.25	0.49	
	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Purple
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	283	240	326	21.50	43.00	Roche Integra AMP buffer 37°C
	U/l	220	187	253	16.50	33.00	Roche Integra AMP buffer 30°C
	U/l	181	153	209	14.00	28.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	278	236	320	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	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	27.4	21.7	33.1	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Roche JG factored
mg/dl	1.64	1.29	1.99	0.18	0.35		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	81.4	64.3	98.5	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	µmol/l	82.7	65.3	100	8.70	17.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.84	3.82	5.86	0.51	1.02	
	µmol/l	82.6	65.3	99.9	8.65	17.30	Diazonium ion
	mg/dl	4.83	3.82	5.84	0.51	1.01	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	118	108	128	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
CK Total	U/l	491	403	579	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	398	318	478	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	399	319	479	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	394	315	473	39.50	79.00	Jaffe rate blanked
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	392	314	470	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.43	3.55	5.31	0.44	0.88	
gamma-GT	U/l	157	134	180	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	124	106	142	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	97	83	111	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	180	153	207	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	121	163	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	94	128	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	3.55	3.02	4.08	0.27	0.53	Direct HDL Roche 3rd generation
	mg/dl	137	117	157	10.00	20.00	
	mmol/l	3.44	2.92	3.96	0.26	0.52	Direct HDL Roche 4th Generation
	mg/dl	133	113	153	10.00	20.00	
Iron	µmol/l	39.3	32.3	46.3	3.50	7.00	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.54	4.54	6.54	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.9	40.9	58.9	4.50	9.00	
LD (LDH)	U/l	688	585	791	51.50	103.00	P->L German methods 37°C
	U/l	497	422	572	37.50	75.00	P->L German methods 30°C
	U/l	349	297	401	26.00	52.00	P->L German methods 25°C
	U/l	373	317	429	28.00	56.00	L->P IFCC 37°C
	U/l	269	229	309	20.00	40.00	L->P IFCC 30°C
	U/l	189	161	217	14.00	28.00	L->P IFCC 25°C
	U/l	52	42	62	5.00	10.00	Roche Colorimetric 37°C
Lipase	U/l	52	42	62	5.00	10.00	Roche Colorimetric 37°C
	U/l	52	42	62	5.00	10.00	
Magnesium	mmol/l	1.79	1.57	2.01	0.11	0.22	Xylidyl Blue
	mg/dl	4.35	3.82	4.88	0.27	0.53	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.78	1.56	2.00	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.33	3.79	4.87	0.27	0.54	
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.91	5.86	7.96	0.53	1.05	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.45	5.94	6.96	0.26	0.51	ISE method - indirect
Protein Total	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction end point
	g/dl	4.63	3.70	5.56	0.47	0.93	
Sodium	mmol/l	161	153	169	4.00	8.00	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	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.01	10.4	0.61	1.21	

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.24	8.05	10.4	0.60	1.19	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	32.1	27.3	36.9	2.40	4.80	Bromocresol Green
	g/dl	3.21	2.73	3.69	0.24	0.48	
	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Purple
	g/dl	2.89	2.46	3.32	0.22	0.43	
	g/l	30.5	25.9	35.1	2.30	4.60	Turbidimetric Assays
	g/dl	3.05	2.59	3.51	0.23	0.46	
Alkaline Phosphatase	U/l	265	225	305	20.00	40.00	Roche Integra AMP buffer 37°C
	U/l	206	175	237	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	169	144	194	12.50	25.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	255	217	293	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	276	234	318	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	29.4	23.2	35.6	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.72	1.36	2.08	0.18	0.36	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	29.6	23.4	35.8	3.10	6.20	Roche JG factored
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Bilirubin Total	µmol/l	82.6	65.3	99.9	8.65	17.30	Diazo with Dichloroaniline (DCA)
	mg/dl	4.83	3.82	5.84	0.51	1.01	
	µmol/l	81.4	64.3	98.5	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	81.4	64.3	98.5	8.55	17.10	Diazonium ion
	mg/dl	4.76	3.76	5.76	0.50	1.00	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.95	6.05	7.85	0.45	0.90	Cholesterol Oxidase
	mg/dl	268	234	302	17.00	34.00	
Cholinesterase	U/l	5001	4001	6001	500.00	1000.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	478	392	564	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	299	245	353	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	394	315	473	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.45	3.56	5.34	0.45	0.89	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	388	310	466	39.00	78.00	Jaffe rate blanked
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
gamma-GT	U/l	149	127	171	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	117	100	134	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	92	78	106	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	116	156	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.47	2.95	3.99	0.26	0.52	Direct HDL Roche 3rd generation
	mg/dl	134	114	154	10.00	20.00	
	mmol/l	3.49	2.97	4.01	0.26	0.52	Direct HDL Roche 4th Generation
	mg/dl	135	115	155	10.00	20.00	
Iron	µmol/l	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	5.42	4.44	6.40	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.8	40.0	57.6	4.40	8.80	
LD (LDH)	U/l	368	313	423	27.50	55.00	L->P IFCC 37°C
	U/l	266	226	306	20.00	40.00	L->P IFCC 30°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 25°C
Lithium	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.26	1.62	0.09	0.18	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.78	1.57	1.99	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.44	5.92	6.96	0.26	0.52	ISE method - indirect
Protein Total	g/l	46.2	36.9	55.5	4.65	9.30	Biuret reaction end point
	g/dl	4.62	3.69	5.55	0.47	0.93	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	μmol/l	42.8	33.8	51.8	4.50	9.00	FE+UIBC(saturation with iron)
	μg/dl	239	189	289	25.00	50.00	
	μmol/l	41.3	32.6	50.0	4.35	8.70	Calculated from Transferrin
	μg/dl	231	182	280	24.50	49.00	
Triglycerides	mmol/l	2.91	2.45	3.37	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	259	218	300	20.50	41.00	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.53	0.47	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.97	7.81	10.1	0.58	1.16	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	

**Roche Cobas c701 / c702 / c711**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.00	7.83	10.2	0.59	1.17	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	31.5	26.8	36.2	2.35	4.70	Bromocresol Green
	g/dl	3.15	2.68	3.62	0.24	0.47	
Alkaline Phosphatase	U/l	533	453	613	40.00	80.00	Diethanolamine buffer DEA 37°C
	U/l	374	318	430	28.00	56.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	301	256	346	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	309	263	355	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Enzymatic
Bile Acids	µmol/l	46.7	37.4	56.0	4.65	9.30	5th Generation Colorimetric
Bilirubin Direct	µmol/l	30.4	24.0	36.8	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	µmol/l	32.8	25.9	39.7	3.45	6.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.92	1.52	2.32	0.20	0.40	
Bilirubin Total	µmol/l	91.9	72.6	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.38	4.25	6.51	0.57	1.13	
	µmol/l	103	81.5	125	10.75	21.50	Oxidation to Biliverdin/Vanadate
	mg/dl	6.03	4.77	7.29	0.63	1.26	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.60	6.61	8.59	0.50	0.99	Cholesterol Oxidase
	mg/dl	293	255	331	19.00	38.00	
CK Total	U/l	524	430	618	47.00	94.00	CK-NAC substrate start (DGKC) 37°C
	U/l	562	461	663	50.50	101.00	
Creatinine	µmol/l	345	276	414	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.90	3.12	4.68	0.39	0.78	
	µmol/l	389	311	467	39.00	78.00	Enzymatic UV method
	mg/dl	4.40	3.51	5.29	0.45	0.89	
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.3	13.8	18.8	1.25	2.50	Hexokinase
	mg/dl	294	249	339	22.50	45.00	
	mmol/l	16.4	13.9	18.9	1.25	2.50	Glucose oxidase
	mg/dl	296	250	342	23.00	46.00	
Iron	µmol/l	39.1	32.1	46.1	3.50	7.00	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
Lactate	mmol/l	5.31	4.35	6.27	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.8	39.2	56.4	4.30	8.60	
LD (LDH)	U/l	734	624	844	55.00	110.00	P->L German methods 37°C
	U/l	366	311	421	27.50	55.00	
Lipase	U/l	86	69	103	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.15	1.89	2.41	0.13	0.26	Colorimetric
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.55	6.03	7.07	0.26	0.52	Enzymatic
	mmol/l	6.26	5.76	6.76	0.25	0.50	ISE method - direct
Protein Total	g/l	48.0	38.4	57.6	4.80	9.60	Biuret reaction end point
	g/dl	4.80	3.84	5.76	0.48	0.96	
Sodium	mmol/l	155	147	163	4.00	8.00	Enzymatic
	mmol/l	158	150	166	4.00	8.00	ISE method - direct
TIBC	µmol/l	45.3	35.8	54.8	4.75	9.50	Direct Colorimetric
	µg/dl	253	200	306	26.50	53.00	
Triglycerides	mmol/l	3.02	2.54	3.50	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	267	225	309	21.00	42.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.61	8.37	10.9	0.62	1.24	

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Green
	g/dl	3.03	2.58	3.48	0.23	0.45	
	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Purple
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	305	259	351	23.00	46.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
Amylase Total	U/l	295	250	340	22.50	45.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bile Acids	µmol/l	49.4	39.5	59.3	4.95	9.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Bilirubin Total	µmol/l	97.6	77.1	118	10.25	20.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.71	4.51	6.91	0.60	1.20	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	121	111	131	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.14	6.22	8.06	0.46	0.92	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	512	420	604	46.00	92.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	378	302	454	38.00	76.00	Enzymatic UV method
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	μmol/l	370	296	444	37.00	74.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.18	3.34	5.02	0.42	0.84	
gamma-GT	U/l	175	148	202	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.0	12.8	17.2	1.10	2.20	Hexokinase
	mg/dl	270	231	309	19.50	39.00	
	mmol/l	15.1	12.8	17.4	1.15	2.30	Glucose oxidase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.29	1.95	2.63	0.17	0.34	Direct Clearance Method
	mg/dl	88.4	75.3	102	6.55	13.10	
Iron	μmol/l	39.1	32.0	46.2	3.55	7.10	Colorimetric without ppt.
	μg/dl	219	179	259	20.00	40.00	
Lactate	mmol/l	5.48	4.49	6.47	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.4	40.5	58.3	4.45	8.90	
LD (LDH)	U/l	707	601	813	53.00	106.00	P->L German methods 37°C
	U/l	371	315	427	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	371	315	427	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	79	63	95	8.00	16.00	Other Colorimetric 37°C
Lithium	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	



SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400				ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)			
Lot. No. 1079UE Cat. No. HE1532 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2023-02-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.42	5.90	6.94	0.26	0.52	ISE method - indirect
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	μmol/l	45.0	35.6	54.4	4.70	9.40	FE+UIBC(saturation with iron)
	μg/dl	252	199	305	26.50	53.00	
	μmol/l	44.8	35.4	54.2	4.70	9.40	Direct Colorimetric
	μg/dl	250	198	302	26.00	52.00	
	μmol/l	37.3	29.5	45.1	3.90	7.80	
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	8.33	10.8	0.63	1.25	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Purple
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	313	266	360	23.50	47.00	Siemens Dimension AMP buffer 37°C
	U/l	311	264	358	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	154	123	185	15.50	31.00	Tris buffer with P5P 37°C
	U/l	147	118	176	14.50	29.00	Tris buffer with P5P NVKC 37°C
	U/l	154	123	185	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	346	294	398	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	182	145	219	18.50	37.00	Tris buffer with P5P 37°C
	U/l	187	149	225	19.00	38.00	Tris buffer with P5P NVKC 37°C
	U/l	186	148	224	19.00	38.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Total	µmol/l	86.9	68.6	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.08	4.01	6.15	0.54	1.07	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.79	5.91	7.67	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	228	296	17.00	34.00	
	mmol/l	6.86	5.97	7.75	0.45	0.89	Dimension-Siemens reagents
	mg/dl	265	230	300	17.50	35.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	474	389	559	42.50	85.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	386	309	463	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	μmol/l	391	313	469	39.00	78.00	Jaffe rate blanked
	mg/dl	4.42	3.54	5.30	0.44	0.88	
gamma-GT	U/l	179	153	205	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	196	167	225	14.50	29.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.77	2.35	3.19	0.21	0.42	Direct HDL PEGME
	mg/dl	107	90.7	123	8.15	16.30	
Iron	μmol/l	37.6	30.8	44.4	3.40	6.80	Colorimetric without ppt.
	μg/dl	210	172	248	19.00	38.00	
LD (LDH)	U/l	349	297	401	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	250	200	300	25.00	50.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.77	1.55	1.99	0.11	0.22	Methylthymol blue
	mg/dl	4.30	3.77	4.83	0.27	0.53	
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.40	5.88	6.92	0.26	0.52	ISE method - indirect
Protein Total	g/l	47.6	38.1	57.1	4.75	9.50	Biuret reaction end point
	g/dl	4.76	3.81	5.71	0.48	0.95	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect

**SIEMENS DIMENSION EXL®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	256	215	297	20.50	41.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	216	300	21.00	42.00	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.16	7.96	10.4	0.60	1.20	

SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.9	26.3	35.5	2.30	4.60	Bromocresol Green
	g/dl	3.09	2.63	3.55	0.23	0.46	
	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Purple
	g/dl	2.96	2.52	3.40	0.22	0.44	
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	Siemens Dimension AMP buffer 37°C
	U/l	318	270	366	24.00	48.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	152	122	182	15.00	30.00	Tris buffer with P5P 37°C
	U/l	155	124	186	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	349	297	401	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	181	145	217	18.00	36.00	Tris buffer with P5P 37°C
	U/l	190	152	228	19.00	38.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Total	µmol/l	86.1	68.0	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.04	3.98	6.10	0.53	1.06	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	119	110	128	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.89	6.00	7.78	0.45	0.89	Dimension-Siemens reagents
	mg/dl	266	232	300	17.00	34.00	
CK Total	U/l	473	388	558	42.50	85.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	378	303	453	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.42	5.12	0.43	0.85	


SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1079UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	378	303	453	37.50	75.00	Enzymatic UV method
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	390	312	468	39.00	78.00	IDMS traceable
	mg/dl	4.41	3.53	5.29	0.44	0.88	
gamma-GT	U/l	198	168	228	15.00	30.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct HDL PPD
	mg/dl	113	96.5	130	8.25	16.50	
	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL PEGME
	mg/dl	110	93.4	127	8.30	16.60	
Iron	µmol/l	37.5	30.7	44.3	3.40	6.80	Colorimetric without ppt.
	µg/dl	210	172	248	19.00	38.00	
LD (LDH)	U/l	348	296	400	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	246	197	295	24.50	49.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Methylthymol blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.25	1.92	2.58	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.98	5.95	8.01	0.52	1.03	
	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	6.35	5.84	6.86	0.26	0.51	ISE method - indirect
Protein Total	g/l	47.3	37.9	56.7	4.70	9.40	Biuret reaction end point
	g/dl	4.73	3.79	5.67	0.47	0.94	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)					
Lot. No. 1079UE Cat. No. HE1532 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2023-02-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease end point
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.22	8.03	10.4	0.60	1.19	