













































## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	163	138	188	12.50	25.00	L->P 37°C
	U/l	512	435	589	38.50	77.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	248	211	285	18.50	37.00	L->P IFCC 37°C
Lithium	mmol/l	1.02	0.89	1.15	0.06	0.13	Spectrophotometric
	mg/dl	0.708	0.620	0.796	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Calmagite
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	304	243	365	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction kinetic
	g/dl	5.69	4.55	6.83	0.57	1.14	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.4	33.5	51.3	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	237	187	287	25.00	50.00	
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.23	1.03	1.43	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	109	91.2	127	8.90	17.80	

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Beckman-Conductivity
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.56	6.43	8.69	0.57	1.13	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	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	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	

## BIOSYSTEMS A15

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	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
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	76.2	104	7.05	14.10	
Urea	mmol/l	6.79	5.77	7.81	0.51	1.02	Urease end point
	mg/dl	40.8	34.7	46.9	3.05	6.10	
	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.33	5.51	7.15	0.41	0.82	



## BIOSYSTEMS A25

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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	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	106	90	122	8.00	16.00	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
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
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
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.5	40.5	54.5	3.50	7.00	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point	
	g/dl	5.95	4.76	7.14	0.60	1.19		
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	97.4	81.5	113	7.95	15.90		
	mmol/l	1.16	0.98	1.34	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	103	86.5	120	8.25	16.50		
Urea	mmol/l	6.96	5.92	8.00	0.52	1.04	Urease end point	
	mg/dl	41.8	35.6	48.0	3.10	6.20		
	mmol/l	6.82	5.80	7.84	0.51	1.02	Urease kinetic	
	mg/dl	41.0	34.9	47.1	3.05	6.10		
	mmol/l	6.82	5.80	7.84	0.51	1.02	BUN	
	mg/dl	19.1	16.2	22.0	1.45	2.90		
	Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	6.20	5.39	7.01	0.41	0.81	
mmol/l		0.39	0.34	0.44	0.03	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		6.47	5.63	7.31	0.42	0.84		
mmol/l		0.40	0.35	0.45	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		6.75	5.88	7.62	0.44	0.87		

## Biotechnica/Wiener BT and CB Series

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.32	2.09	2.55	0.12	0.23	
Calcium	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	104	95.3	113	4.35	8.70	Colorimetric
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	134	172	9.50	19.00	
	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5878	4702	7054	588.00	1176.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	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	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	45	39	51	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	35	31	39	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	24	32	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PPD
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric with ppt.
	µg/dl	113	92.8	133	10.10	20.20	
	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	
LD (LDH)	U/l	361	307	415	27.00	54.00	P->L Scandinavian & Dutch 37°C
	U/l	261	222	300	19.50	39.00	P->L Scandinavian & Dutch 30°C
	U/l	183	156	210	13.50	27.00	P->L Scandinavian & Dutch 25°C
	U/l	388	330	446	29.00	58.00	P->L SFBC 37°C
	U/l	280	238	322	21.00	42.00	P->L SFBC 30°C
	U/l	197	167	227	15.00	30.00	P->L SFBC 25°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.86	2.38	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - direct
Protein Total	g/l	62.1	49.6	74.6	6.25	12.50	Biuret reaction end point
	g/dl	6.21	4.96	7.46	0.63	1.25	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
Urea	mmol/l	7.49	6.36	8.62	0.57	1.13	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.49	6.37	8.61	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.01	5.22	6.80	0.40	0.79	

## COBAS INTEGRA®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	40.4	34.3	46.5	3.05	6.10	Turbidimetric Assays
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	149	128	174	11.50	23.00	Colorimetric 37°C
	U/l	118	100	136	9.00	18.00	Colorimetric 30°C
	U/l	96	82	110	7.00	14.00	Colorimetric 25°C
	U/l	151	128	174	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	93	79	107	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

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	20.9	16.5	25.3	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	20.7	16.4	25.0	2.15	4.30	Roche JG factored
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	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	
Chloride	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	101	92.5	110	4.25	8.50	ISE indirect
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	174	143	205	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	109	90	128	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C
	U/l	175	144	206	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	168	138	198	15.00	30.00	CK-NAC serum start (DGKC) 37°C
	U/l	105	86	124	9.50	19.00	CK-NAC serum start (DGKC) 30°C
Creatinine	U/l	71	59	83	6.00	12.00	CK-NAC serum start (DGKC) 25°C
	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	124	99.4	149	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	123	98.8	147	12.10	24.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	124	98.8	149	12.60	25.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	IDMS traceable
mg/dl	1.38	1.10	1.66	0.14	0.28		



## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PEGME
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	20.8	17.1	24.5	1.85	3.70	Colorimetric with ppt.
	µg/dl	116	95.6	136	10.20	20.40	
	µmol/l	21.2	17.3	25.1	1.95	3.90	Colorimetric without ppt.
	µg/dl	119	96.7	141	11.15	22.30	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	386	328	444	29.00	58.00	P->L German methods 37°C
	U/l	279	237	321	21.00	42.00	P->L German methods 30°C
	U/l	196	166	226	15.00	30.00	P->L German methods 25°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	216	184	248	16.00	32.00	L->P 37°C
	U/l	156	133	179	11.50	23.00	L->P 30°C
	U/l	110	93	127	8.50	17.00	L->P 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.02	0.89	1.15	0.06	0.13	Ion selective electrode
	mg/dl	0.708	0.621	0.795	0.04	0.09	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.85	2.37	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction end point
	g/dl	5.53	4.42	6.64	0.56	1.11	
	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction kinetic
	g/dl	5.53	4.42	6.64	0.56	1.11	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	175	269	23.50	47.00	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	104	87.3	121	8.35	16.70		
	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	102	85.8	118	8.10	16.20		
	mmol/l	1.18	0.99	1.37	0.09	0.19	L/G Kinase EP. no correction	
	mg/dl	104	87.9	120	8.05	16.10		
Urea	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	105	88.5	122	8.25	16.50		
	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/Glycerol Dehydrogenase	
	mg/dl	105	88.5	122	8.25	16.50		
	Urea	mmol/l	7.15	6.07	8.23	0.54	1.08	Urease end point
		mg/dl	43.0	36.5	49.5	3.25	6.50	
mmol/l		7.00	5.95	8.05	0.53	1.05	Urease kinetic	
mg/dl		42.1	35.8	48.4	3.15	6.30		
Uric Acid (Urate)	mmol/l	7.00	5.95	8.05	0.53	1.05	BUN	
	mg/dl	19.6	16.7	22.5	1.45	2.90		
	Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.96	5.17	6.75	0.40	0.79	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.93	5.16	6.70	0.39	0.77		
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.90	5.14	6.66	0.38	0.76		

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	137	179	10.50	21.00	
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	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	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.30	1.11	1.49	0.10	0.19	HDL - Ultra
	mg/dl	50.2	42.8	57.6	3.70	7.40	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Protein Total	g/l	60.7	48.6	72.8	6.05	12.10	Biuret reaction end point
	g/dl	6.07	4.86	7.28	0.61	1.21	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.9	121	8.55	17.10	
	mmol/l	1.18	1.00	1.37	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	88.1	120	7.95	15.90	
Urea	mmol/l	7.50	6.38	8.62	0.56	1.12	Urease end point
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.41	0.35	0.46	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.80	5.91	7.69	0.45	0.89	
	mmol/l	0.40	0.35	0.45	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.67	5.81	7.53	0.43	0.86	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	11.3	7.57	15.0	1.87	3.73	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	100	85	115	7.50	15.00	AMP optimised to IFCC 25°C
	U/l	196	167	225	14.50	29.00	Randox AMP 37°C
	U/l	153	130	176	11.50	23.00	Randox AMP 30°C
	U/l	125	107	143	9.00	18.00	Randox AMP 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
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	

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Lot. No. 1399UN 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	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	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	5614	4491	6737	561.50	1123.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	175	144	206	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°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	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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
	U/l	50	43	57	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.31	5.37	7.25	0.47	0.94	Glucose dehydrogenase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.6	41.3	55.9	3.65	7.30	
Iron	µmol/l	20.9	17.1	24.7	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	95.6	138	10.70	21.40	
LD (LDH)	U/l	376	320	432	28.00	56.00	P->L German methods 37°C
	U/l	271	231	311	20.00	40.00	P->L German methods 30°C
	U/l	191	162	220	14.50	29.00	P->L German methods 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	



## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.21	1.01	1.41	0.10	0.20	Lipase/Glycerol Dehydrogenase
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.09	6.63	0.39	0.77	

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	261	222	300	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	93	79	107	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	15.4	12.2	18.6	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	32.1	25.4	38.8	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.27	1.93	0.17	0.33	

## ILab 600®/650®/Aries/Taurus

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	98.1	90.2	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	6015	4812	7218	601.50	1203.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	162	133	191	14.50	29.00	CK-NAC (IFCC) 37°C
	U/l	101	83	119	9.00	18.00	CK-NAC (IFCC) 30°C
	U/l	69	57	81	6.00	12.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	24	32	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	

## ILab 600®/650®/Aries/Taurus

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	1.24	1.05	1.43	0.10	0.19	HDL - Ultra
	mg/dl	47.9	40.5	55.3	3.70	7.40	
Iron	µmol/l	20.7	17.0	24.4	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
LD (LDH)	U/l	389	331	447	29.00	58.00	P->L German methods 37°C
	U/l	281	239	323	21.00	42.00	P->L German methods 30°C
	U/l	197	168	226	14.50	29.00	P->L German methods 25°C
	U/l	399	339	459	30.00	60.00	P->L SFBC 37°C
	U/l	288	245	331	21.50	43.00	P->L SFBC 30°C
	U/l	202	172	232	15.00	30.00	P->L SFBC 25°C
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
	mmol/l	1.18	0.99	1.37	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.5	121	8.25	16.50	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	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	

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

Lot. No. 1399UN 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	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
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
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	104	95.5	113	4.25	8.50	ISE direct
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	

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

Lot. No. 1399UN 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	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	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	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PEGME
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct Clearance Method
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	µmol/l	22.7	18.6	26.8	2.05	4.10	Colorimetric without ppt.
	µg/dl	127	104	150	11.50	23.00	



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

Lot. No. 1399UN 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	449	382	516	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	324	276	372	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	228	194	262	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct
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	142	135	149	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
Urea	mmol/l	7.09	6.03	8.15	0.53	1.06	Urease end point
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.25	5.44	7.06	0.41	0.81	





Konelab 20/30/60®/Thermo Scientific Indiko Plus		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1399UN 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	0.37	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.13	5.33	6.93	0.40	0.80	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	216	171	261	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	163	129	197	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	122	97	147	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	11.3	7.57	15.0	1.87	3.73	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	8.30	5.56	11.0	1.37	2.74	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	40.3	34.2	46.4	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.03	3.42	4.64	0.31	0.61	
	g/l	40.4	34.4	46.4	3.00	6.00	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.04	3.44	4.64	0.30	0.60	
	U/l	153	130	176	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	160	136	184	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	182	155	209	13.50	27.00	AMP non-optimised 37°C
U/l	142	121	163	10.50	21.00	AMP non-optimised 30°C	
U/l	116	99	133	8.50	17.00	AMP non-optimised 25°C	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	43	34	52	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	31	47	4.00	8.00	Phosphate buffer DGKC 37°C
	U/l	29	23	35	3.00	6.00	Phosphate buffer DGKC 30°C
	U/l	22	17	27	2.50	5.00	Phosphate buffer DGKC 25°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	57	79	5.50	11.00	Roche EPS Liquid 37°C
	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	95	81	109	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	95	80	110	7.50	15.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	95	81	109	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	103	88	118	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	92	78	106	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.11	0.91	1.31	0.10	0.20	Immunoturbidimetric
	mg/dl	111	91.0	131	10.00	20.00	
Apolipoprotein B	g/l	0.63	0.52	0.75	0.06	0.11	Immunoturbidimetric
	mg/dl	63.2	51.8	74.6	5.70	11.40	
AST (GOT)	U/l	39	31	47	4.00	8.00	Colorimetric 37°C
	U/l	26	21	31	2.50	5.00	Colorimetric 30°C
	U/l	19	15	23	2.00	4.00	Colorimetric 25°C
	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	28	40	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer with P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer with P5P NVKC 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer with P5P NVKC 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Colorimetric
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	13.9	11.0	16.8	1.45	2.90	Differential rate pH change
	mmol/l	14.7	11.6	17.8	1.55	3.10	Enzymatic
Bile Acids	µmol/l	24.0	19.2	28.9	2.42	4.83	4th Generation Colorimetric
	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.2	16.7	25.7	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.977	1.50	0.13	0.26	
	µmol/l	19.7	15.5	23.9	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	14.4	11.4	17.4	1.50	3.00	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
	µmol/l	18.3	14.4	22.1	1.93	3.87	Modified Jendrassik
	mg/dl	1.07	0.842	1.30	0.11	0.23	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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 Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	37.9	29.9	45.9	4.00	8.00	Diazo with Dichloroaniline (DCA)
	mg/dl	2.22	1.75	2.69	0.24	0.47	
	µmol/l	30.0	23.7	36.3	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	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	25.5	20.1	30.9	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	31.1	24.5	37.7	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.82	1.43	2.21	0.20	0.39	
	µmol/l	30.6	24.2	37.0	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.79	1.42	2.16	0.19	0.37	
µmol/l	36.8	29.1	44.5	3.85	7.70	Modified Jendrassik	
mg/dl	2.15	1.70	2.60	0.23	0.45		
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.24	2.01	2.47	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.06	9.90	0.46	0.92	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Methylthymol blue
	mg/dl	8.54	7.70	9.38	0.42	0.84	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	2.24	2.01	2.47	0.12	0.23	Arsenazo III	
	mg/dl	8.98	8.06	9.90	0.46	0.92		
	mmol/l	2.24	2.01	2.47	0.12	0.23	Phosphonazo	
	mg/dl	8.98	8.06	9.90	0.46	0.92		
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA	
	mg/dl	8.82	7.94	9.70	0.44	0.88		
	Chloride	mmol/l	102	94.1	110	4.09	8.18	Colorimetric
		mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
mmol/l		99.7	91.7	108	4.00	8.00	ISE indirect	
mmol/l		101	93.3	109	3.85	7.70	ISE direct	
mmol/l		113	104	122	4.50	9.00	Optical Fluorescence	
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems	
	mg/dl	149	129	169	10.00	20.00		
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - Abell Kendall	
	mg/dl	155	135	175	10.00	20.00		
	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - IDMS	
	mg/dl	155	135	175	10.00	20.00		
	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Dehydrogenase	
	mg/dl	157	136	178	10.50	21.00		
Cholinesterase	U/l	5515	4412	6618	551.50	1103.00	Colorimetric Benzoylcholine 37°C	
	U/l	5773	4618	6928	577.45	1154.89	Colorimetric Butyrylthiocholine 37°C	
	U/l	5596	4477	6715	559.50	1119.00	Ortho Vitros Microslide Systems 37°C	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC serum start (DGKC) 37°C	
	U/l	114	93	135	10.50	21.00	CK-NAC serum start (DGKC) 30°C	
	U/l	77	63	91	7.00	14.00	CK-NAC serum start (DGKC) 25°C	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	176	144	208	16.00	32.00	CK-NAC substrate start (DGKC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	75	61	89	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	111	91	131	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	185	152	218	16.50	33.00	Monothioglycerol 37°C
	U/l	116	95	137	10.50	21.00	Monothioglycerol 30°C
	U/l	79	65	93	7.00	14.00	Monothioglycerol 25°C
	U/l	178	146	210	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C
U/l	111	91	131	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	76	62	90	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	16.2	12.9	19.5	1.65	3.30	Atomic absorption
	µg/dl	103	82.0	124	10.50	21.00	
	µmol/l	16.3	13.0	19.5	1.63	3.26	Colorimetric
	µg/dl	103	82.7	123	10.15	20.30	
Cortisol	nmol/l	460	345	575	57.50	115.00	Roche Cobas E411
	µg/dl	16.6	12.4	20.8	2.10	4.20	
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
mg/dl	1.45	1.16	1.74	0.15	0.29		



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	103	153	12.50	25.00	Creatinine PAP method
	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	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	123	98.2	148	12.40	24.80	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
µmol/l	122	97.6	146	12.20	24.40	Vitros IDMS Traceable	
mg/dl	1.38	1.10	1.66	0.14	0.28		
µmol/l	127	102	152	12.50	25.00	IDMS traceable	
mg/dl	1.44	1.15	1.73	0.15	0.29		
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.19	1.75	2.63	0.22	0.44	Immunoturbidimetric
	ng/ml	1.71	1.37	2.05	0.17	0.34	
Folate	nmol/l	47.1	35.8	58.5	5.67	11.34	Roche Cobas 6000/8000
	ng/ml	20.8	15.8	25.8	2.50	5.00	
Free T4	pmol/l	16.1	12.1	20.1	2.00	4.00	Abbott Architect
	ng/dl	1.26	0.944	1.58	0.16	0.32	
	pg/ml	12.6	9.44	15.8	1.58	3.16	Abbott Architect
	pmol/l	17.7	13.2	22.2	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/dl	1.38	1.03	1.73	0.18	0.35	
	pg/ml	13.8	10.3	17.3	1.75	3.50	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	18.7	14.0	23.4	2.35	4.70	Siemens Immulite 2000/2500
	ng/dl	1.46	1.09	1.83	0.19	0.37	
	pg/ml	14.6	10.9	18.3	1.85	3.70	Siemens Immulite 2000/2500
	pmol/l	20.2	15.2	25.2	2.50	5.00	Siemens Immulite 1000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Siemens Immulite 1000
	pmol/l	16.4	12.3	20.5	2.05	4.10	Beckman Dxl800
	ng/dl	1.28	0.959	1.60	0.16	0.32	
	pg/ml	12.8	9.59	16.0	1.61	3.21	Beckman Dxl800
	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Elecsys
	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 Elecsys
	pmol/l	16.7	12.5	20.9	2.10	4.20	Beckman Access
	ng/dl	1.30	0.975	1.63	0.16	0.33	
	pg/ml	13.0	9.75	16.3	1.63	3.25	Beckman Access
	pmol/l	22.8	17.1	28.5	2.85	5.70	Tosoh Series
	ng/dl	1.78	1.33	2.23	0.23	0.45	
	pg/ml	17.8	13.3	22.3	2.25	4.50	Tosoh Series
	pmol/l	34.0	25.5	42.5	4.25	8.50	Vitros ECi
	ng/dl	2.65	1.99	3.31	0.33	0.66	
pg/ml	26.5	19.9	33.1	3.30	6.60	Vitros ECi	
pmol/l	20.6	15.5	25.7	2.55	5.10	Roche Cobas E411	
ng/dl	1.61	1.21	2.01	0.20	0.40		
pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Cobas E411	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	20.2	15.2	25.2	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas 6000/8000
	pmol/l	21.3	16.0	26.6	2.65	5.30	SNIBE Maglumi Analysers
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	SNIBE Maglumi Analysers
	pmol/l	19.0	14.2	23.8	2.40	4.80	Biomerieux Vidas FT4N Kit
	ng/dl	1.48	1.11	1.85	0.19	0.37	
	pg/ml	14.8	11.1	18.5	1.85	3.70	Biomerieux Vidas FT4N Kit
	pmol/l	19.2	14.4	24.0	2.40	4.80	Siemens Centaur CP
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Siemens Centaur CP
Gentamicin	µmol/l	7.49	5.99	8.99	0.75	1.50	Immunoturbidimetric
	µg/ml	3.58	2.86	4.30	0.36	0.72	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	22	32	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	50	43	57	3.50	7.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	39	34	44	2.50	5.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	31	27	35	2.00	4.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	18	14	23	2.14	4.27	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	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems	
	mg/dl	108	91.9	124	8.05	16.10		
	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose dehydrogenase	
	mg/dl	112	95.0	129	8.50	17.00		
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase	
	mg/dl	111	94.2	128	8.40	16.80		
	mmol/l	6.13	5.21	7.05	0.46	0.92	Oxygen electrode	
	mg/dl	110	93.9	126	8.05	16.10		
	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase	
	mg/dl	112	95.1	129	8.45	16.90		
	HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PPD
		mg/dl	51.0	43.2	58.8	3.90	7.80	
mmol/l		1.24	1.05	1.43	0.10	0.19	Direct HDL Immunoseparation	
mg/dl		47.9	40.5	55.3	3.70	7.40		
mmol/l		1.21	1.03	1.39	0.09	0.18	Vitros Magnetic HDL	
mg/dl		46.7	39.8	53.6	3.45	6.90		
mmol/l		1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME	
mg/dl		48.3	40.9	55.7	3.70	7.40		
mmol/l		1.21	1.03	1.39	0.09	0.18	Direct Clearance Method	
mg/dl		46.7	39.8	53.6	3.45	6.90		

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.36	1.16	1.56	0.10	0.20	HDL - Ultra
	mg/dl	52.5	44.8	60.2	3.85	7.70	
mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation	
mg/dl	50.6	42.8	58.4	3.90	7.80		
Immunoglobulin A	g/l	1.80	1.35	2.26	0.23	0.45	Immunoturbidimetric
	mg/dl	180	135	225	22.50	45.00	
Immunoglobulin G	g/l	7.47	6.13	8.81	0.67	1.34	Immunoturbidimetric
	mg/dl	747	613	881	67.00	134.00	
Immunoglobulin M	g/l	0.85	0.68	1.02	0.09	0.17	Immunoturbidimetric
	mg/dl	85.2	68.2	102	8.50	17.00	
Iron	μmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric with ppt.
	μg/dl	112	92.2	132	9.90	19.80	
	μmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.
	μg/dl	115	93.9	136	10.55	21.10	
	μmol/l	20.3	16.6	24.0	1.85	3.70	Ortho Vitros Microslide Systems
	μg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.3	11.0	15.6	1.15	2.30	
	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lactate	mmol/l	1.47	1.20	1.74	0.14	0.27	Ion selective electrode
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.48	1.22	1.74	0.13	0.26	UV LDH
	mg/dl	13.3	11.0	15.6	1.15	2.30	
LAP	U/l	18	15	21	1.53	3.05	NAGEL 37°C
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	192	163	221	14.50	29.00	L->P 37°C
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	97	83	111	7.00	14.00	L->P 25°C
	U/l	404	343	465	30.50	61.00	P->L Scandinavian & Dutch 37°C
	U/l	292	248	336	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	205	174	236	15.50	31.00	P->L Scandinavian & Dutch 25°C
	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	390	332	448	29.00	58.00	P->L SFBC 37°C
	U/l	282	240	324	21.00	42.00	P->L SFBC 30°C
	U/l	198	168	228	15.00	30.00	P->L SFBC 25°C
	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
U/l	103	88	118	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
	U/l	185	149	221	18.00	36.00	Ortho Vitros Microslide Systems 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Atomic absorption
	mg/dl	0.750	0.658	0.842	0.05	0.09	
	mmol/l	1.28	1.12	1.44	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.889	0.778	1.00	0.06	0.11	
	mmol/l	1.05	0.92	1.18	0.07	0.13	Flame photometry
	mg/dl	0.729	0.639	0.819	0.05	0.09	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Ion selective electrode
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	1.06	0.93	1.19	0.07	0.13	Spectrophotometric
	mg/dl	0.736	0.645	0.827	0.05	0.09	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Randox Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
	mmol/l	0.83	0.73	0.93	0.05	0.10	Arsenazo III
	mg/dl	2.02	1.78	2.26	0.12	0.24	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.80	2.30	0.13	0.25	
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Atomic absorption
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.87	0.77	0.97	0.05	0.10	Calmagite
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.87	0.77	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Methylthymol blue
	mg/dl	2.03	1.79	2.27	0.12	0.24	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	0.87	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.03	1.79	2.27	0.12	0.24	
Osmolality	mOsm/kg	297	237	357	30.00	60.00	Calculated
	mOsm/kg	305	244	366	30.50	61.00	Freezing point depression
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	1.45	1.24	1.66	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.07	3.74	4.40	0.17	0.33	Enzymatic
	mmol/l	4.05	3.73	4.37	0.16	0.32	Flame photometry
	mmol/l	3.97	3.66	4.28	0.16	0.31	ISE method - direct
	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
	mmol/l	3.99	3.67	4.31	0.16	0.32	Optical Fluorescence
	mmol/l	3.90	3.58	4.22	0.16	0.32	Colorimetric
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	
PSA Total	ng/ml =	12.6	9.47	15.7	1.57	3.13	Roche Elecsys Modular E170
	ng/ml =	12.9	9.68	16.1	1.61	3.22	Beckman Access standardised to Hybritech
	ng/ml =	10.3	7.75	12.9	1.28	2.55	bioMerieux VIDAS TPSA
	ng/ml =	9.71	7.28	12.1	1.22	2.43	Siemens Centaur XP/XPT/Classic
	ng/ml =	8.97	6.73	11.2	1.12	2.24	Abbott Architect
	ng/ml =	8.66	6.49	10.8	1.09	2.17	Siemens Dimension
	ng/ml =	12.4	9.33	15.5	1.54	3.07	Cobas E411
	ng/ml =	12.4	9.32	15.5	1.54	3.08	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	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	146	139	153	3.58	7.16	Enzymatic
	mmol/l	142	135	149	3.50	7.00	Flame photometry
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
	mmol/l	140	133	147	3.50	7.00	Optical Fluorescence
	mmol/l	143	136	150	3.50	7.00	Colorimetric
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.11	0.23	Abbott Architect
	µU/ml =	1.54	1.23	1.85	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.51	1.21	1.81	0.15	0.30	bioMerieux VIDAS TSH3 Ultrasensitive

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.30	1.04	1.56	0.13	0.26	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.46	1.17	1.75	0.15	0.29	Siemens Immulite 2000/2500
	µU/ml =	1.36	1.09	1.63	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.63	1.31	1.95	0.16	0.32	Roche Elecsys
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Beckman Access Fast TSH
	µU/ml =	1.34	1.08	1.60	0.13	0.26	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Vitros ECi
	µU/ml =	1.62	1.30	1.94	0.16	0.32	Roche Cobas E411
	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.51	1.21	1.81	0.15	0.30	SNIBE Maglumi Analysers
µU/ml =	1.31	1.05	1.57	0.13	0.26	Beckman Dxl 600/800 Access (3rd IS)	
TIBC	µmol/l	43.8	34.6	53.0	4.60	9.20	Ortho Vitros Microslide Systems
	µg/dl	245	193	297	26.00	52.00	
	µmol/l	38.1	30.1	46.1	4.00	8.00	Removal of excess free iron
	µg/dl	213	168	258	22.50	45.00	
	µmol/l	40.5	32.0	49.0	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	226	179	273	23.50	47.00	
	µmol/l	39.6	31.3	47.9	4.15	8.30	Direct Colorimetric
	µg/dl	221	175	267	23.00	46.00	
	µmol/l	42.0	33.2	50.8	4.40	8.80	Calculated from Transferrin
µg/dl	235	186	284	24.50	49.00		
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	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	1.89	1.42	2.36	0.24	0.47	Abbott Architect
	ng/ml	1.23	0.924	1.54	0.15	0.31	
	ng/dl	123	92.4	154	15.30	30.60	Abbott Architect
	nmol/l	2.11	1.58	2.64	0.27	0.53	BioMerieux Vidas
	ng/ml	1.37	1.03	1.71	0.17	0.34	
	ng/dl	137	103	171	17.00	34.00	BioMerieux Vidas
	nmol/l	2.29	1.72	2.86	0.29	0.57	Siemens Centaur XP/XPT/Classic
	ng/ml	1.49	1.12	1.86	0.19	0.37	
	ng/dl	149	112	186	18.50	37.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.02	1.51	2.53	0.26	0.51	Siemens Immulite 1000
	ng/ml	1.32	0.983	1.66	0.17	0.34	
	ng/dl	132	98.3	166	16.85	33.70	Siemens Immulite 1000
	nmol/l	2.25	1.69	2.81	0.28	0.56	Roche Elecsys
	ng/ml	1.46	1.10	1.82	0.18	0.36	
	ng/dl	146	110	182	18.00	36.00	Roche Elecsys
	nmol/l	2.21	1.66	2.76	0.28	0.55	Beckman Access
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	Beckman Access
	nmol/l	2.49	1.87	3.11	0.31	0.62	Vitros ECi
	ng/ml	1.62	1.22	2.02	0.20	0.40	
ng/dl	162	122	202	20.00	40.00	Vitros ECi	
nmol/l	2.22	1.66	2.78	0.28	0.56	Roche Cobas E411	
ng/ml	1.45	1.08	1.82	0.19	0.37		
ng/dl	145	108	182	18.50	37.00	Roche Cobas E411	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	2.18	1.64	2.72	0.27	0.54	Roche Cobas 6000/8000
	ng/ml	1.42	1.07	1.77	0.18	0.35	
	ng/dl	142	107	177	17.50	35.00	Roche Cobas 6000/8000
	nmol/l	2.39	1.79	2.99	0.30	0.60	Siemens Centaur CP
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Siemens Centaur CP
Total T4	nmol/l	90.4	67.8	113	11.30	22.60	Abbott Architect
	µg/dl	7.05	5.29	8.81	0.88	1.76	
	ng/ml	70.5	52.9	88.1	8.80	17.60	Abbott Architect
	nmol/l	83.9	62.9	105	10.50	21.00	BioMerieux Vidas
	µg/dl	6.54	4.91	8.17	0.82	1.63	
	ng/ml	65.4	49.1	81.7	8.15	16.30	BioMerieux Vidas
	nmol/l	82.6	62.0	103	10.30	20.60	Siemens Centaur XP/XPT/Classic
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Siemens Centaur XP/XPT/Classic
	nmol/l	79.3	59.5	99.1	9.90	19.80	Tosoh Series
	µg/dl	6.19	4.64	7.74	0.78	1.55	
	ng/ml	61.9	46.4	77.4	7.75	15.50	Tosoh Series
	nmol/l	82.6	62.0	103	10.30	20.60	Vitros ECi
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Vitros ECi
	nmol/l	87.7	65.8	110	10.95	21.90	Roche Cobas E411
	µg/dl	6.84	5.13	8.55	0.86	1.71	
	ng/ml	68.4	51.3	85.5	8.55	17.10	Roche Cobas E411
nmol/l	84.2	63.1	105	10.55	21.10	Roche Cobas 6000/8000	
µg/dl	6.57	4.92	8.22	0.83	1.65		
ng/ml	65.7	49.2	82.2	8.25	16.50	Roche Cobas 6000/8000	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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 T4	nmol/l	108	80.8	135	13.60	27.20	Microgenics DRI assay
	µg/dl	8.42	6.30	10.5	1.06	2.12	
	ng/ml	84.2	63.0	105	10.60	21.20	Microgenics DRI assay
	nmol/l	95.4	71.6	119	11.90	23.80	SNIBE Maglumi Analysers
	µg/dl	7.44	5.58	9.30	0.93	1.86	
	ng/ml	74.4	55.8	93.0	9.30	18.60	SNIBE Maglumi Analysers
	nmol/l	95.7	71.8	120	11.95	23.90	Siemens Centaur CP
	µg/dl	7.46	5.60	9.32	0.93	1.86	
Transferrin	ng/ml	74.6	56.0	93.2	9.30	18.60	Siemens Centaur CP
	g/l	1.88	1.51	2.26	0.19	0.37	Immunoturbidimetric
Triglycerides	mg/dl	188	151	225	18.50	37.00	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.0	120	8.50	17.00	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	86.1	120	8.45	16.90	
	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	103	85.9	120	8.55	17.10	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	102	85.6	118	8.20	16.40	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	103	85.9	120	8.55	17.10	
	mmol/l	1.34	1.12	1.56	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	119	99.1	139	9.95	19.90	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease hypochlorite
	mg/dl	43.2	36.7	49.7	3.25	6.50	
mmol/l	7.30	6.21	8.39	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	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Reduction methods
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.80	5.04	6.56	0.38	0.76	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	5.86	5.11	6.61	0.38	0.75		
Vitamin B12	pmol/l	461	369	553	46.00	92.00	Roche Cobas E411
	pg/ml	625	500	750	62.50	125.00	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Zinc	µmol/l	23.1	18.5	27.7	2.30	4.60	Atomic absorption
	µg/dl	151	121	181	15.00	30.00	
	µmol/l	23.0	18.4	27.6	2.30	4.60	Colorimetric with deproteinisation
	µg/dl	150	120	180	15.00	30.00	



MEAN OF ALL INSTRUMENTS (Elec.)			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)				
Lot. No. 1399UN 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 (electrophoresis)		67.0	60.4	73.6	3.30	6.60	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.8	4.4	7.2	0.70	1.39	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.1	5.4	8.8	0.85	1.70	% of total Protein (Beckman Capillary)
beta-globulin		9.6	7.3	11.9	1.15	2.30	% of total Protein (Beckman Capillary)
gamma-globulin		10.5	8.0	13.0	1.26	2.52	% of total Protein (Beckman Capillary)



## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
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	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	28.6	22.6	34.6	3.00	6.00	
mg/dl	1.67	1.32	2.02	0.18	0.35		
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Ion selective electrode
	mg/dl	8.98	8.10	9.86	0.44	0.88	

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	179	146	212	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC (IFCC) 30°C
Creatinine	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
mg/dl	1.47	1.18	1.76	0.15	0.29		
gamma-GT	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	
	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra	
mg/dl	51.3	43.6	59.0	3.85	7.70		
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.09	3.47	4.71	0.31	0.62	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
TIBC	µmol/l	43.9	34.7	53.1	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	245	194	296	25.50	51.00	
Triglycerides	mmol/l	1.17	0.99	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.2	121	8.40	16.80	

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	86.2	120	8.40	16.80	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.3	116	7.85	15.70	
Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease hypochlorite
	mg/dl	46.6	39.7	53.5	3.45	6.90	
Uric Acid (Urate)	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	

## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	40.3	34.2	46.4	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	11.1	8.77	13.4	1.17	2.33	BuBc Vitros Slide
	mg/dl	0.649	0.513	0.785	0.07	0.14	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.8	10.9	16.7	1.45	2.90	BuBc Vitros Slide
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Chloride	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	129	169	10.00	20.00	
Cholinesterase	U/l	5596	4477	6715	559.50	1119.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	158	130	186	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	123	98.2	148	12.40	24.80	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.39	1.11	1.67	0.14	0.28	


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

Lot. No. 1399UN 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	122	97.6	146	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
Free T4	pmol/l	34.0	25.5	42.5	4.25	8.50	Vitros ECi
	ng/dl	2.65	1.99	3.31	0.33	0.66	
	pg/ml	15.0	11.2	18.8	1.90	3.80	
gamma-GT	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros Magnetic HDL
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	20.3	16.6	24.0	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	231	196	266	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	185	149	221	18.00	36.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.28	1.12	1.44	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.889	0.778	1.00	0.06	0.11	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.80	2.30	0.13	0.25	


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

Lot. No. 1399UN 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	1.45	1.24	1.66	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros DT60/DT60 II
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.03	3.70	4.36	0.17	0.33	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.87	4.70	7.04	0.59	1.17	
PSA Total	ng/ml =	11.7	8.74	14.7	1.48	2.96	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.43	1.14	1.72	0.15	0.29	Vitros ECi
TIBC	µmol/l	43.8	34.6	53.0	4.60	9.20	Ortho Vitros Microslide Systems
	µg/dl	245	193	297	26.00	52.00	
Total T3	nmol/l	2.49	1.87	3.11	0.31	0.62	Vitros ECi
	ng/ml	1.62	1.22	2.02	0.20	0.40	
	ng/dl	162	122	202	20.00	40.00	Vitros ECi
Total T4	nmol/l	82.6	62.0	103	10.30	20.60	Vitros ECi
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Vitros ECi
Triglycerides	mmol/l	1.34	1.12	1.56	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	119	99.1	139	9.95	19.90	
	mmol/l	1.23	1.03	1.43	0.10	0.20	Vitros DT60/DT60 II
	mg/dl	109	91.2	127	8.90	17.80	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	

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

Lot. No. 1399UN 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	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	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	5.61	4.89	6.33	0.36	0.72	



## PRESTIGE 24i

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	75	64	86	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
Bilirubin Direct	µmol/l	19.3	15.3	23.3	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	95	135	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C

## PRESTIGE 24i

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	123	98.2	148	12.40	24.80	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct Clearance Method
	mg/dl	47.5	40.1	54.9	3.70	7.40	
Iron	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	
LD (LDH)	U/l	422	359	485	31.50	63.00	P->L German methods 37°C
	U/l	305	259	351	23.00	46.00	P->L German methods 30°C
	U/l	214	182	246	16.00	32.00	P->L German methods 25°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.0	116	8.00	16.00	

**PRESTIGE 24i****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1399UN 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	L/G Kinase EP. no correction
	mg/dl	108	90.3	126	8.85	17.70	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.06	5.28	6.84	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.96	6.46	0.38	0.75	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	7.59	5.09	10.1	1.25	2.50	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	7.78	5.21	10.4	1.29	2.57	Naphthyl phosphate substrate End point 37°C
	U/l	8.10	5.42	10.8	1.34	2.68	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Purple
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	39.9	34.0	45.8	2.95	5.90	Turbidimetric Assays
	g/dl	3.99	3.40	4.58	0.30	0.59	
Alkaline Phosphatase	U/l	148	125	171	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	95	80	110	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	149	127	171	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 25°C
	U/l	149	126	172	11.50	23.00	Colorimetric 37°C
	U/l	116	98	134	9.00	18.00	Colorimetric 30°C
	U/l	95	81	109	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	78	104	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	89	76	102	6.50	13.00	BM/Roche Colorimetric 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	13.7	10.9	16.5	1.40	2.80	Colorimetric
	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.3	18.7	27.9	2.30	4.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.2	16.7	25.7	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.977	1.50	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.3	16.8	25.8	2.25	4.50	Roche JG factored
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	25.6	20.2	31.0	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.95	3.43	4.47	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5835	4668	7002	583.50	1167.00	Colorimetric Benzoylcholine 37°C
	U/l	5590	4472	6708	559.00	1118.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	168	138	198	15.00	30.00	CK-NAC serum start (DGKC) 37°C
	U/l	105	86	124	9.50	19.00	CK-NAC serum start (DGKC) 30°C
	U/l	71	59	83	6.00	12.00	CK-NAC serum start (DGKC) 25°C
	U/l	172	141	203	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	108	88	128	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	175	143	207	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	122	97.8	146	12.10	24.20	Alkaline picrate with deproteinization
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	μmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	μmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	μmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Free T4	μmol/l	128	102	154	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Free T4	μmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	pmol/l	20.2	15.2	25.2	2.50	5.00	Roche Cobas 6000/8000
Free T4	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas 6000/8000
	gamma-GT	U/l	45	38	52	3.50	7.00
U/l		35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
U/l		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

## Roche Cobas 6000 c501 e601

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	6.12	5.20	7.04	0.46	0.92	Glucose dehydrogenase	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase	
	mg/dl	111	94.6	127	8.20	16.40		
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL PEGME	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
Iron	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
	Iron	µmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric with ppt.
		µg/dl	115	94.5	136	10.25	20.50	
Iron	µmol/l	20.7	16.9	24.5	1.90	3.80	Colorimetric without ppt.	
	µg/dl	116	94.5	138	10.75	21.50		
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.2	10.9	15.5	1.15	2.30		
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P 37°C	
	U/l	147	125	169	11.00	22.00	L->P 30°C	
	U/l	103	88	118	7.50	15.00	L->P 25°C	
	U/l	391	332	450	29.50	59.00	P->L Scandinavian & Dutch 37°C	
	U/l	282	240	324	21.00	42.00	P->L Scandinavian & Dutch 30°C	
	U/l	198	168	228	15.00	30.00	P->L Scandinavian & Dutch 25°C	



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	390	331	449	29.50	59.00	P->L German methods 37°C	
	U/l	282	239	325	21.50	43.00	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	31	25	37	3.00	6.00	Other Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C	
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Ion selective electrode	
	mg/dl	0.743	0.651	0.835	0.05	0.09		
	mmol/l	1.05	0.93	1.17	0.06	0.12	Spectrophotometric	
	mg/dl	0.729	0.644	0.814	0.04	0.09		
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Arsenazo III	
	mg/dl	2.11	1.86	2.36	0.13	0.25		
	mmol/l	0.87	0.77	0.98	0.05	0.11	Atomic absorption	
	mg/dl	2.12	1.87	2.37	0.13	0.25		
	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	mmol/l	0.86	0.76	0.96	0.05	0.10	Chlorphosphonazo III	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	mmol/l	0.86	0.75	0.96	0.05	0.10	Enzymatic	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.8	70.0	5.80	11.60	Biuret reaction end point
	g/dl	5.84	4.68	7.00	0.58	1.16	
	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction kinetic
	g/dl	5.86	4.69	7.03	0.59	1.17	
PSA Total	ng/ml =	12.4	9.32	15.5	1.54	3.08	Roche Cobas 6000/8000
Sodium	mmol/l	145	138	152	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	39.0	30.8	47.2	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	218	172	264	23.00	46.00	
	µmol/l	39.3	31.1	47.5	4.10	8.20	Direct Colorimetric
	µg/dl	220	174	266	23.00	46.00	
	µmol/l	45.3	35.8	54.8	4.75	9.50	Calculated from Transferrin
	µg/dl	253	200	306	26.50	53.00	
Total T3	nmol/l	2.18	1.64	2.72	0.27	0.54	Roche Cobas 6000/8000
	ng/ml	1.42	1.07	1.77	0.18	0.35	
	ng/dl	142	107	177	17.50	35.00	Roche Cobas 6000/8000
Total T4	nmol/l	84.2	63.1	105	10.55	21.10	Roche Cobas 6000/8000
	µg/dl	6.57	4.92	8.22	0.83	1.65	
	ng/ml	65.7	49.2	82.2	8.25	16.50	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.1	122	8.45	16.90	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	104	86.8	121	8.60	17.20		
	mmol/l	1.18	0.99	1.37	0.09	0.19	L/G Kinase EP. no correction	
	mg/dl	104	88.0	120	8.00	16.00		
	mmol/l	1.20	1.01	1.39	0.10	0.19	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	106	89.4	123	8.30	16.60		
	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/Glycerol Dehydrogenase	
	mg/dl	105	88.1	122	8.45	16.90		
	UIBC	µmol/l	18.2	15.0	21.4	1.60	3.20	Direct Colorimetric
		µg/dl	102	83.9	120	9.05	18.10	
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	7.23	6.15	8.31	0.54	1.08	Urease kinetic	
	mg/dl	43.5	37.0	50.0	3.25	6.50		
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN	
	mg/dl	20.3	17.3	23.3	1.50	3.00		
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm	
	mg/dl	5.81	5.06	6.56	0.38	0.75		
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.76	5.02	6.50	0.37	0.74		
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.75	5.01	6.49	0.37	0.74		
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.75	5.01	6.49	0.37	0.74		

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Zinc	µmol/l	22.8	18.2	27.4	2.30	4.60	Colorimetric with deproteinisation
	µg/dl	149	119	179	15.00	30.00	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
	g/l	41.8	35.6	48.0	3.10	6.20	Bromocresol Purple
	g/dl	4.18	3.56	4.80	0.31	0.62	
Alkaline Phosphatase	U/l	149	126	172	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	116	98	134	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	95	81	109	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	93	79	107	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
Bilirubin Direct	µmol/l	20.6	16.3	24.9	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	20.2	15.9	24.5	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Roche JG factored
mg/dl	1.18	0.930	1.43	0.13	0.25		

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	20.2	15.9	24.5	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	102	93.5	111	4.25	8.50	ISE indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	133	171	9.50	19.00	
CK Total	U/l	173	142	204	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	108	89	127	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	74	60	88	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.8	150	12.60	25.20	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL Roche 4th Generation
	mg/dl	50.6	43.2	58.0	3.70	7.40	
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	
LD (LDH)	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
	U/l	156	132	180	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	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	Phosphomolybdate enzymatic
	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 UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.1	46.4	69.8	5.85	11.70	Biuret reaction end point
	g/dl	5.81	4.64	6.98	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.4	121	8.30	16.60	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.2	119	8.40	16.80	
	mmol/l	1.21	1.02	1.40	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.18	1.00	1.37	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	88.1	120	7.95	15.90	
Urea	mmol/l	6.98	5.93	8.03	0.53	1.05	Urease kinetic
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.98	5.93	8.03	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	



**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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 no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase 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. 1399UN 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	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Purple
	g/dl	4.22	3.58	4.86	0.32	0.64	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	113	96	130	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	143	122	164	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	111	95	127	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	91	78	104	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	90	76	104	7.00	14.00	Immunoinhibition EPS substrate 37°C
	U/l	68	57	79	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	91	77	105	7.00	14.00	BM/Roche Colorimetric 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

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Roche JG factored
	mg/dl	1.26	0.995	1.53	0.13	0.27	
Bilirubin Total	µmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	27.3	21.5	33.1	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Calcium	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	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	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	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	96.9	89.2	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	134	172	9.50	19.00	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - IDMS	
	mg/dl	154	134	174	10.00	20.00		
Cholinesterase	U/l	5545	4436	6654	554.50	1109.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	171	140	202	15.50	31.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	107	88	126	9.50	19.00	CK-NAC substrate start (DGKC) 30°C	
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C	
	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C	
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C	
	U/l	75	61	89	7.00	14.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.50	1.20	1.80	0.15	0.30		
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.49	1.20	1.78	0.15	0.29		
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		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	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase	
	mg/dl	112	94.8	129	8.60	17.20		
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase	
	mg/dl	111	94.4	128	8.30	16.60		
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	51.0	43.2	58.8	3.90	7.80		
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PEGME	
	mg/dl	49.4	42.1	56.7	3.65	7.30		
Iron	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Roche 4th Generation	
	mg/dl	50.2	42.8	57.6	3.70	7.40		
	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		20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.	
µg/dl		115	93.9	136	10.55	21.10		
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.3	11.0	15.6	1.15	2.30		
LD (LDH)	U/l	385	327	443	29.00	58.00	P->L German methods 37°C	
	U/l	278	236	320	21.00	42.00	P->L German methods 30°C	
	U/l	195	166	224	14.50	29.00	P->L German methods 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	
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C	
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Atomic absorption	
	mg/dl	2.06	1.81	2.31	0.13	0.25		

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.10	1.85	2.35	0.13	0.25	
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	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction kinetic
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	222	175	269	23.50	47.00	
	μmol/l	40.4	31.9	48.9	4.25	8.50	Direct Colorimetric
	μg/dl	226	178	274	24.00	48.00	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.3	121	8.35	16.70	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.4	122	8.30	16.60	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	1.18	0.99	1.37	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	88.0	120	8.00	16.00	
UIBC	μmol/l	19.3	15.8	22.8	1.75	3.50	Direct Colorimetric
	μg/dl	108	88.3	128	9.85	19.70	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
Uric Acid (Urate)	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
	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	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38		0.76
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.86	5.11	6.61	0.38		0.75

## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	75	103	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	21.7	17.2	26.2	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Roche JG factored
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	26.6	21.1	32.1	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	



## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	26.3	20.8	31.8	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	98.2	90.3	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	5641	4513	6769	564.00	1128.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	172	141	203	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	108	88	128	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	171	141	201	15.00	30.00	CK-NAC (IFCC) 37°C
	U/l	107	88	126	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC (IFCC) 25°C
	U/l	73	60	86	6.50	13.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Enzymatic UV method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	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

## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	19.8	16.3	23.3	1.75	3.50	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
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	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.91	1.17	0.06	0.13	Spectrophotometric
	mg/dl	0.722	0.634	0.810	0.04	0.09	
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	

## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.4	32.0	48.8	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	226	179	273	23.50	47.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.7	120	8.15	16.30	
	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.0	121	8.50	17.00	
UIBC	μmol/l	19.3	15.8	22.8	1.75	3.50	Direct Colorimetric
	μg/dl	108	88.3	128	9.85	19.70	
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	298	253	343	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	196	167	225	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	13.0	19.6	1.65	3.30	Enzymatic
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	17.4	13.8	21.0	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	33.9	26.8	41.0	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.98	1.57	2.39	0.21	0.41	
	µmol/l	30.6	24.2	37.0	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.79	1.42	2.16	0.19	0.37	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	100	92.4	108	3.80	7.60	ISE direct

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	4.40	3.83	4.97	0.29	0.57	Cholesterol Oxidase - Abell Kendall
	mg/dl	170	148	192	11.00	22.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	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	6.74	5.73	7.75	0.51	1.01	Hexokinase
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	6.56	5.58	7.54	0.49	0.98	Glucose oxidase
	mg/dl	118	101	135	8.50	17.00	
Iron	µmol/l	20.7	17.0	24.4	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	

<b>RX SERIES®</b>		<b>ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)</b>					
Lot. No. 1399UN 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	4.07	3.74	4.40	0.17	0.33	Enzymatic
	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - direct
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	143	136	150	3.50	7.00	ISE method - direct
	mmol/l	146	139	153	3.50	7.00	Enzymatic
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	Direct Colorimetric
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.2	122	8.40	16.80	
Urea	mmol/l	7.27	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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.23	5.43	7.03	0.40	0.80	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.08	5.29	6.87	0.40	0.79	



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

Lot. No. 1399UN 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	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Purple
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	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	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.4	21.2	31.6	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	32.6	25.8	39.4	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.91	1.51	2.31	0.20	0.40	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	

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

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	101	93.2	109	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.99	3.48	4.50	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	6609	5287	7931	661.00	1322.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	173	142	204	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	126	100	152	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	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	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.97	5.08	6.86	0.45	0.89	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	





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

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.16	0.99	1.34	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct Clearance Method
	mg/dl	45.5	38.6	52.4	3.45	6.90	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.35	1.11	1.59	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.2	10.0	14.4	1.10	2.20	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P 37°C
	U/l	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	203	173	233	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	38	31	45	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.2	45.0	67.4	5.60	11.20	Biuret reaction end point
	g/dl	5.62	4.50	6.74	0.56	1.12	
	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction kinetic
	g/dl	5.58	4.46	6.70	0.56	1.12	



SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)							
Lot. No. 1399UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2023-04-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.2	37.3	57.1	4.95	9.90	Removal of excess free iron
	μg/dl	264	209	319	27.50	55.00	
	μmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	248	196	300	26.00	52.00	
	μmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
μg/dl	257	203	311	27.00	54.00		
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	108	90.3	126	8.85	17.70	
	mmol/l	1.21	1.01	1.41	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	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	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	42.4	36.0	48.8	3.20	6.40	Bromocresol Purple
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	162	137	187	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.807	0.638	0.976	0.08	0.17	
	µmol/l	14.5	11.4	17.6	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.848	0.667	1.03	0.09	0.18	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	99.2	91.2	107	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.47	3.02	3.92	0.23	0.45	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. 1399UN 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	3.45	3.00	3.90	0.23	0.45	Dimension-Siemens reagents
	mg/dl	133	116	150	8.50	17.00	
Cholinesterase	U/l	9793	7834	10000	979.50	1959.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	175	144	206	15.50	31.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	53	71	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	
	mmol/l	6.24	5.31	7.17	0.47	0.93	Oxygen electrode
	mg/dl	112	95.7	128	8.15	16.30	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PPD
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL PEGME
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct Clearance Method
	mg/dl	49.0	41.7	56.3	3.65	7.30	

## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
	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	1.47	1.20	1.74	0.14	0.27	UV LDH
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P 37°C
	U/l	193	164	222	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	135	108	162	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.83	0.73	0.92	0.05	0.10	Methylthymol blue
	mg/dl	2.00	1.76	2.24	0.12	0.24	
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.1	48.0	72.2	6.05	12.10	Biuret reaction end point
	g/dl	6.01	4.80	7.22	0.61	1.21	
PSA Total	ng/ml =	8.66	6.49	10.8	1.09	2.17	Siemens Dimension
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	36.5	28.8	44.2	3.85	7.70	FE+UIBC(saturation with iron)
	µg/dl	204	161	247	21.50	43.00	


**SIEMENS DIMENSION EXL®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	35.2	27.8	42.6	3.70	7.40	Direct Colorimetric
	µg/dl	197	155	239	21.00	42.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Urea	mmol/l	7.55	6.41	8.69	0.57	1.14	Urease end point
	mg/dl	45.4	38.5	52.3	3.45	6.90	
	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	


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

Lot. No. 1399UN 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	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Purple
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	36	52	4.00	8.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	41	63	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.6	19.0	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	14.5	11.4	17.6	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.848	0.667	1.03	0.09	0.18	
Bilirubin Total	µmol/l	29.8	23.6	36.0	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.08	1.87	2.29	0.11	0.21	Arsenazo III
	mg/dl	8.34	7.49	9.19	0.43	0.85	



SIEMENS DIMENSION RxL/Max/Xpand®			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1399UN Cat. No. HN1530 / HS2611								
Size 20 x 5ml / 5 x 5ml		Expiry 2023-04-28		Range				
Analyte	unit	Target	low	high	1SD	2SD	methods	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect	
Cholesterol	mmol/l	3.45	3.00	3.90	0.23	0.45	Cholesterol Oxidase - Abell Kendall	
	mg/dl	133	116	150	8.50	17.00		
	mmol/l	3.47	3.02	3.92	0.23	0.45	Dimension-Siemens reagents	
	mg/dl	134	117	151	8.50	17.00		
Cholinesterase	U/l	9820	7856	10000	982.00	1964.00	Colorimetric - Butyrythiochol. Dimension 37°C	
CK Total	U/l	175	143	207	16.00	32.00	CK-NAC (IFCC) 37°C	
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.50	1.20	1.80	0.15	0.30		
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method	
	mg/dl	1.46	1.16	1.76	0.15	0.30		
	µmol/l	129	104	154	12.50	25.00	Creatinine PAP method	
	mg/dl	1.46	1.18	1.74	0.14	0.28		
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked	
	mg/dl	1.49	1.19	1.79	0.15	0.30		
	µmol/l	132	106	158	13.00	26.00	IDMS traceable	
	mg/dl	1.49	1.20	1.78	0.15	0.29		
	gamma-GT	U/l	55	47	63	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	6.17	5.25	7.09	0.46	0.92	Glucose dehydrogenase	
	mg/dl	111	94.6	127	8.20	16.40		
	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	1.25	1.06	1.44	0.10	0.19	Direct HDL PPD	
	mg/dl	48.3	40.9	55.7	3.70	7.40		




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

Lot. No. 1399UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	90.6	131	10.20	20.40	
	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	1.43	1.17	1.69	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.9	10.5	15.3	1.20	2.40	
	mmol/l	1.48	1.21	1.75	0.14	0.27	UV LDH
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	191	162	220	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	136	109	163	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.12	0.98	1.26	0.07	0.14	Spectrophotometric
	mg/dl	0.778	0.682	0.874	0.05	0.10	
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Methylthymol blue
	mg/dl	2.03	1.78	2.28	0.13	0.25	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	



SIEMENS DIMENSION RxL/Max/Xpand®			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1399UN Cat. No. HN1530 / HS2611								
Size 20 x 5ml / 5 x 5ml		Expiry 2023-04-28		Range				
Analyte	unit	Target	low	high	1SD	2SD	methods	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect	
TIBC	μmol/l	36.6	28.9	44.3	3.85	7.70	Removal of excess free iron	
	μg/dl	205	162	248	21.50	43.00		
	μmol/l	37.7	29.8	45.6	3.95	7.90	FE+UIBC(saturation with iron)	
	μg/dl	211	167	255	22.00	44.00		
	μmol/l	36.6	28.9	44.3	3.85	7.70	Direct Colorimetric	
μg/dl	205	162	248	21.50	43.00			
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	99.1	83.1	115	8.00	16.00		
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	98.2	82.3	114	7.95	15.90		
Urea	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	98.2	82.7	114	7.75	15.50		
	Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease end point
		mg/dl	45.7	38.8	52.6	3.45	6.90	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic	
	mg/dl	44.4	37.7	51.1	3.35	6.70		
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN	
	mg/dl	20.7	17.6	23.8	1.55	3.10		
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm	
	mg/dl	5.81	5.06	6.56	0.38	0.75		
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38	0.76		
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38	0.76		



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1399UN 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	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

## SIEMENS DIMENSION Vista®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	14.7	11.6	17.8	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.860	0.679	1.04	0.09	0.18	
Bilirubin Total	µmol/l	29.8	23.6	36.0	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	104	96.1	112	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Cholesterol Oxidase - Abell Kendall
	mg/dl	140	122	158	9.00	18.00	
	mmol/l	3.46	3.01	3.91	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	116	152	9.00	18.00	
CK Total	U/l	177	145	209	16.00	32.00	CK-NAC (IFCC) 37°C

## SIEMENS DIMENSION Vista®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	59	50	68	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Hexokinase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL PPD
	mg/dl	50.2	42.5	57.9	3.85	7.70	Direct HDL PEGME
	mmol/l	1.31	1.11	1.51	0.10	0.20	
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
LD (LDH)	U/l	201	170	232	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	150	121	179	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	3.97	3.66	4.28	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.26	1.05	1.47	0.11	0.21	Lipase/GPO-PAP no correction
	mg/dl	112	92.9	131	9.55	19.10	

**SIEMENS DIMENSION Vista®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1399UN 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	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	


**VITALAB FLEXOR®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1399UN 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	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	250	212	288	19.00	38.00	Diethanolamine buffer DEA 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
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	
Glucose	mmol/l	6.51	5.53	7.49	0.49	0.98	Glucose oxidase
	mg/dl	117	99.7	134	8.65	17.30	
Protein Total	g/l	60.8	48.7	72.9	6.05	12.10	Biuret reaction end point
	g/dl	6.08	4.87	7.29	0.61	1.21	
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.59	5.73	7.45	0.43	0.86	