

## CALIBRATION SERUM LEVEL 2 (CAL 2)

**CAT. NO.** CAL 2350  
**LOT NO.** 1578UN

**GTIN:** 05055273200959  
**EXPIRY:** 2024-07-28

**SIZE** 20 x 5ml

### INTENDED USE

For use as a Calibrator in clinical chemistry assays. RANDOX Calibration Sera are based on lyophilised human serum. The concentrations and activities are suitable for calibration of clinical chemistry assays on a wide range of automatic analysers. Constituent concentrations are available at 2 levels.

### SAFETY PRECAUTIONS AND WARNINGS

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.

However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

For *in vitro* diagnostic use only.

### STORAGE AND STABILITY

Unreconstituted serum is stable up to the expiry date shown on the side of each individual bottle. Once reconstituted, the components of the Calibration Sera are stable for 8 hours at +15°C to +25°C, 7 days at +2°C to +8°C, and 28 days at -20°C when frozen once (see Limitations).

### PREPARATION FOR USE

Serum must only be reconstituted using the following procedure:

1. Open the vial carefully, avoiding any loss of material.
2. Reconstitute by pipetting exactly 5ml of distilled water at +15°C to +25°C, into the vial.
3. Replace the rubber stopper and leave to stand for 30 minutes out of bright light before use.
4. Swirl gently several times during the reconstitution period to ensure that the contents are completely dissolved.
5. Prior to use, mix the contents by inverting the vial. Do not shake the vial, as the formation of foam should be avoided. Ensure that no lyophilised material remains unreconstituted.
6. The serum is then ready for use with either a manual test or with an automated instrument.

### MATERIALS PROVIDED

Calibration Serum - Level 2  
Cat No. CAL 2350 20 x 5ml

### MATERIALS REQUIRED BUT NOT PROVIDED

Calibrated pipette, double deionised water.

### LIMITATIONS

After reconstitution, Bicarbonate is stable for 8 hours in the closed bottle and 1 hour in the open bottle.

For Total and Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation, Total & Prostatic Acid Phosphatase are stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at -20°C.

Alkaline Phosphatase is stable for 2 days at 2 - 8°C and levels in the reconstituted serum will rise over the stability period.

It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.

Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 1 day at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

GLDH is stable for 1 day at 2 - 8°C.

Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components. Different lot numbers of this calibrator should not be interchanged, as the values assigned to the calibrators vary from lot to lot.

Due to the zinc content in some batches of rubber stoppers, the QC material should be aliquoted into suitable containers without rubber stoppers and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

**VALUE ASSIGNMENT**

Each batch of serum is distributed to approximately 3000 laboratories worldwide and values are assigned by a consensus of results obtained by these laboratories. The Calibration values for each instrument have been determined in at least 10 independent laboratories. Values are verified against a master lot of calibrator, which is traceable to reference methods or reference materials. In some cases, values may be assigned at Randox Laboratories in comparison to a master lot of calibrator, which is traceable to reference methods or reference materials.

If an instrument specific value is not available, refer to the Method section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email [Technical.Services@randox.com](mailto:Technical.Services@randox.com).

**NOTES**

- ® All trademarks recognised.
- (1) Values established by reference laboratories officially recognised by the Federal Chamber of Physicians in Germany.
- (2) DGKC: German Society for Clinical Chemistry
- (3) IFCC: International Federation of Clinical Chemistry
- (4) SCE: Scandinavian Committee on Enzymes

EC	REP
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## CALIBRATION SERUM LEVEL 2 (CAL 2)

METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Acid Phosphatase (Total)	U/l	18.8	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.6	Bromocresol Green
	g/dl	4.06	
	g/l	41.4	Bromocresol Purple
	g/dl	4.14	
	g/l	38.0	Turbidimetric Assays
	g/dl	3.80	
Alkaline Phosphatase	U/l	292	Diethanolamine buffer DEA 37°C
	U/l	227	Diethanolamine buffer DEA 30°C
	U/l	187	Diethanolamine buffer DEA 25°C
	U/l	191	AMP optimised to IFCC 37°C
	U/l	149	AMP optimised to IFCC 30°C
	U/l	122	AMP optimised to IFCC 25°C
	U/l	181	AMP non-optimised 37°C
	U/l	141	AMP non-optimised 30°C
	U/l	116	AMP non-optimised 25°C
	U/l	176	Colorimetric 37°C
	U/l	137	Colorimetric 30°C
	U/l	112	Colorimetric 25°C
	ALT (GPT)	U/l	33
U/l		24	Colorimetric 30°C
U/l		19	Colorimetric 25°C
U/l		39	Tris buffer with P5P 37°C
U/l		29	Tris buffer with P5P 30°C
U/l		22	Tris buffer with P5P 25°C
U/l		36	Tris buffer without P5P 37°C
U/l		27	Tris buffer without P5P 30°C
U/l		20	Tris buffer without P5P 25°C
U/l		34	Phosphate buffer DGKC 37°C
U/l		25	Phosphate buffer DGKC 30°C
U/l		19	Phosphate buffer DGKC 25°C
U/l		45	Tris buffer with P5P NVKC 37°C
U/l		33	Tris buffer with P5P NVKC 30°C
U/l		25	Tris buffer with P5P NVKC 25°C
Amylase Pancreatic	U/l	69	Immunoinhibition EPS substrate 37°C
	U/l	69	Roche EPS Liquid 37°C
	U/l	80	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	96	pNP Maltotrioxide substrates 37°C
	U/l	102	Siemens - blocked pNPG7 37°C

## CALIBRATION SERUM LEVEL 2 (CAL 2)

METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Amylase Total	U/l	81	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	109	Randox Liquid Ethylidene pNPG7 37°C
	U/l	96	BM/Roche Colorimetric pNPG7 37°C
	U/l	97	Roche Integra 2-chloro-pNPG7 37°C
	U/l	94	Other Roche 2-chloro-pNPG7 37°C
	U/l	96	Roche liquid stable pNPG7 37°C
	U/l	103	Siemens 2-chloro-pNPG3 37°C
	U/l	102	Beckman Coulter - blocked pNPG7 37°C
	U/l	101	Beckman Synchron AMY7 37°C
	U/l	100	Abbott Architect Non-IFCC Cal. 37°C
	U/l	110	Abbott Architect IFCC Cal. 37°C
	U/l	88	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	34	Colorimetric 37°C
	U/l	23	Colorimetric 30°C
	U/l	16	Colorimetric 25°C
	U/l	52	Tris buffer with P5P 37°C
	U/l	35	Tris buffer with P5P 30°C
	U/l	25	Tris buffer with P5P 25°C
	U/l	34	Tris buffer without P5P 37°C
	U/l	23	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
	U/l	50	Tris buffer with P5P NVKC 37°C
	U/l	34	Tris buffer with P5P NVKC 30°C
	U/l	24	Tris buffer with P5P NVKC 25°C
Bicarbonate	mmol/l	14.8	Colorimetric
	mmol/l	13.5	Differential rate pH change
	mmol/l	14.0	Enzymatic
	mmol/l	14.5	Ion selective electrode
Bile Acids	µmol/l	25.5	4th Generation Colorimetric
	µmol/l	25.8	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	
	µmol/l	20.3	Diazo with Sulphanilic Acid
	mg/dl	1.19	
	µmol/l	20.5	Diazo with Dichloroaniline (DCA)
	mg/dl	1.20	
	µmol/l	18.4	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	
Bilirubin Total	µmol/l	27.7	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	
	µmol/l	28.8	Diazo with Sulphanilic Acid
	mg/dl	1.68	

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METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	26.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	
	µmol/l	26.7	Diazonium ion
	mg/dl	1.56	
	µmol/l	31.5	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	
	µmol/l	36.6	Modified Jendrassik
	mg/dl	2.14	
Calcium	mmol/l	2.11	Cresolphthalein complexone
	mg/dl	8.46	
	mmol/l	2.09	Ion selective electrode
	mg/dl	8.38	
	mmol/l	2.13	Arsenazo III
	mg/dl	8.54	
	mmol/l	2.12	NM-BAPTA
	mg/dl	8.50	
Chloride	mmol/l	94.8	ISE indirect
	mmol/l	96.1	ISE direct
Cholesterol	mmol/l	4.27	Cholesterol Oxidase - Abell Kendall
	mg/dl	165	
	mmol/l	4.31	Cholesterol Oxidase - IDMS
	mg/dl	166	
	mmol/l	4.20	Cholesterol Dehydrogenase
	mg/dl	162	
Cholinesterase	U/l	6107	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	CK-NAC serum start (DGKC) 37°C
	U/l	128	CK-NAC serum start (DGKC) 30°C
	U/l	87	CK-NAC serum start (DGKC) 25°C
	U/l	204	CK-NAC substrate start (DGKC) 37°C
	U/l	128	CK-NAC substrate start (DGKC) 30°C
	U/l	87	CK-NAC substrate start (DGKC) 25°C
	U/l	203	CK-NAC (IFCC) 37°C
	U/l	127	CK-NAC (IFCC) 30°C
	U/l	86	CK-NAC (IFCC) 25°C
	Copper	µmol/l	17.3
µg/dl		110	
µmol/l		17.4	Colorimetric
µg/dl		111	
Creatinine	µmol/l	139	Alkaline picrate with deproteinization
	mg/dl	1.57	
	µmol/l	139	Alkaline picrate no deproteinization
	mg/dl	1.58	

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METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Creatinine	µmol/l	145	Enzymatic UV method
	mg/dl	1.63	
	µmol/l	144	Creatinine PAP method
	mg/dl	1.62	
	µmol/l	142	Jaffe rate blanked
	mg/dl	1.60	
	µmol/l	168	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.90	
	µmol/l	156	Jaffe rate blanked compensated (-18 µmol/l)
mg/dl	1.76		
gamma-GT	µmol/l	137	Vitros IDMS Traceable
	mg/dl	1.55	
	µmol/l	140	IDMS traceable
	mg/dl	1.58	
	U/l	44	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
U/l	28	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
GLDH	U/l	44	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	35	DCL gamma glutamyl-3-carboxy-4-nitroanilide 30°C
	U/l	27	DCL gamma glutamyl-3-carboxy-4-nitroanilide 25°C
	U/l	49	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	20	Triethanolamine buffer 50 mmol 37°C
	U/l	15	Triethanolamine buffer 50 mmol 30°C
	U/l	12	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.21	Glucose dehydrogenase
	mg/dl	112	
	mmol/l	6.23	Hexokinase
	mg/dl	112	
Iron	mmol/l	6.42	Glucose oxidase
	mg/dl	116	
	µmol/l	20.1	Colorimetric with ppt.
	µg/dl	112	
Lactate	µmol/l	20.1	Colorimetric without ppt.
	µg/dl	112	
	mmol/l	1.78	Ion selective electrode
	mg/dl	16.0	
Lactate	mmol/l	1.69	Colorimetric Lactate Oxidase
	mg/dl	15.2	

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METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Lactate	mmol/l	1.62	Enzymatic Electrode
	mg/dl	14.6	
	mmol/l	1.73	UV LDH
	mg/dl	15.6	
LD (LDH)	U/l	199	L->P 37°C
	U/l	144	L->P 30°C
	U/l	101	L->P 25°C
	U/l	438	P->L Scandinavian & Dutch 37°C
	U/l	316	P->L Scandinavian & Dutch 30°C
	U/l	222	P->L Scandinavian & Dutch 25°C
	U/l	415	P->L German methods 37°C
	U/l	300	P->L German methods 30°C
	U/l	210	P->L German methods 25°C
	U/l	417	P->L SFBC 37°C
	U/l	301	P->L SFBC 30°C
	U/l	211	P->L SFBC 25°C
	U/l	208	L->P IFCC 37°C
	U/l	150	L->P IFCC 30°C
U/l	105	L->P IFCC 25°C	
Lipase	U/l	32	Other Colorimetric 37°C
	U/l	35	Roche Colorimetric 37°C
	U/l	42	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	Ion selective electrode
	mg/dl	0.709	
	mmol/l	1.07	Spectrophotometric
Magnesium	mmol/l	0.844	Arsenazo III
	mg/dl	2.05	
	mmol/l	0.924	Calmagite
	mg/dl	2.25	
	mmol/l	0.898	Xylidyl Blue
	mg/dl	2.18	
	mmol/l	0.899	Methylthymol blue
	mg/dl	2.18	
	mmol/l	0.903	Chlorphosphonazo III
	mg/dl	2.19	
mmol/l	0.858	Enzymatic	
mg/dl	2.08		
Osmolality	mOsm/kg	298	Calculated
	mOsm/kg	302	Freezing point depression
Phosphate Inorganic	mmol/l	1.46	Phosphomolybdate enzymatic
	mg/dl	4.53	
	mmol/l	1.46	Phosphomolybdate UV
	mg/dl	4.53	

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METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Potassium	mmol/l	3.92	ISE method - direct
	mmol/l	3.98	ISE method - indirect
	mmol/l	4.10	Enzymatic
Protein Total	g/l	58.2	Biuret reaction end point
	g/dl	5.82	
	g/l	58.5	Biuret reaction kinetic
	g/dl	5.85	
Sodium	mmol/l	140	ISE method - direct
	mmol/l	142	ISE method - indirect
	mmol/l	144	Enzymatic
TIBC	µmol/l	42.8	Removal of excess free iron
	µg/dl	239	
	µmol/l	43.5	FE+UIBC(saturation with iron)
	µg/dl	243	
	µmol/l	47.3	Direct Colorimetric
	µg/dl	264	
	µmol/l	47.5	Calculated from Transferrin
	µg/dl	266	
Triglycerides	mmol/l	1.12	Lipase/GPO-PAP no correction
	mg/dl	99.1	
	mmol/l	1.10	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	
	mmol/l	1.11	L/G Kinase EP. no correction
	mg/dl	98.2	
	mmol/l	1.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	104	
Urea	mmol/l	7.80	Urease end point
	mg/dl	46.9	
	mmol/l	7.84	Urease kinetic
	mg/dl	47.1	
	mmol/l	7.78	Urease hypochlorite
	mg/dl	46.8	
	mmol/l	7.84	BUN
	mg/dl	22.0	
Uric Acid (Urate)	mmol/l	0.361	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.06	
	mmol/l	0.361	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.06	



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METHOD Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.358	Spectrophotometric at 280-290
	mg/dl	6.01	
	mmol/l	0.359	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	
Zinc	µmol/l	29.7	Atomic absorption
	µg/dl	194	
	µmol/l	31.2	Colorimetric with deproteinisation
	µg/dl	204	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	40.3	Bromocresol Green
	g/dl	4.03	
	g/l	41.5	Bromocresol Purple
	g/dl	4.15	
Alkaline Phosphatase	U/l	181	AMP optimised to IFCC 37°C
	U/l	180	AMP non-optimised 37°C
ALT (GPT)	U/l	37	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	100	Abbott Architect Non-IFCC Cal. 37°C
	U/l	113	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	34	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.1	Enzymatic
Bile Acids	µmol/l	25.3	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.3	Diazo with Sulphanilic Acid
	mg/dl	1.19	
	µmol/l	20.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	
Bilirubin Total	µmol/l	27.7	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	
	µmol/l	27.4	Diazo with Sulphanilic Acid
	mg/dl	1.60	
	µmol/l	27.3	Diazonium ion
	mg/dl	1.60	
Calcium	mmol/l	2.08	Arsenazo III
	mg/dl	8.34	
Chloride	mmol/l	96.6	ISE indirect
Cholesterol	mmol/l	4.25	Cholesterol Oxidase - Abell Kendall
	mg/dl	164	
Cholinesterase	U/l	6949	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	CK-NAC (IFCC) 37°C
	U/l	212	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	12.9	Colorimetric
	µg/dl	82.2	
Creatinine	µmol/l	144	Alkaline picrate no deproteinization
	mg/dl	1.63	
	µmol/l	143	Enzymatic UV method
	mg/dl	1.61	
gamma-GT	U/l	45	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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Abbott Alinity/ Architect c/ci Systems® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Glucose	mmol/l	6.14	Hexokinase
	mg/dl	111	
	mmol/l	6.34	Glucose oxidase
	mg/dl	114	
Iron	µmol/l	21.2	Colorimetric with ppt.
	µg/dl	119	
	µmol/l	20.7	Colorimetric without ppt.
	µg/dl	116	
Lactate	mmol/l	1.74	Colorimetric Lactate Oxidase
	mg/dl	15.7	
LD (LDH)	U/l	197	L->P 37°C
	U/l	200	L->P IFCC 37°C
Lipase	U/l	30	Other Colorimetric 37°C
Lithium	mmol/l	1.08	Spectrophotometric
	mg/dl	0.750	
Magnesium	mmol/l	0.845	Arsenazo III
	mg/dl	2.05	
	mmol/l	0.858	Enzymatic
	mg/dl	2.08	
Phosphate Inorganic	mmol/l	1.44	Phosphomolybdate enzymatic
	mg/dl	4.46	
	mmol/l	1.44	Phosphomolybdate UV
	mg/dl	4.46	
Potassium	mmol/l	3.97	ISE method - indirect
Protein Total	g/l	59.7	Biuret reaction end point
	g/dl	5.97	
	g/l	59.6	Biuret reaction kinetic
	g/dl	5.96	
Sodium	mmol/l	142	ISE method - indirect
TIBC	µmol/l	42.4	FE+UIBC(saturation with iron)
	µg/dl	237	
	µmol/l	48.1	Calculated from Transferrin
	µg/dl	269	
Triglycerides	mmol/l	1.07	Lipase/GPO-PAP no correction
	mg/dl	94.7	
	mmol/l	1.05	L/G Kinase EP. no correction
	mg/dl	92.9	
	mmol/l	1.09	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	
UIBC	µmol/l	21.2	Direct Colorimetric
	µg/dl	119	
Urea	mmol/l	7.94	Urease kinetic
	mg/dl	47.7	

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Abbott Alinity/ Architect c/ci Systems® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Urea	mmol/l	7.94	BUN
	mg/dl	22.2	
Uric Acid (Urate)	mmol/l	0.362	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	
	mmol/l	0.360	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.05	
mmol/l	0.358	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	6.01		

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Beckman Coulter AU Series® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	38.9	Bromocresol Green
	g/dl	3.89	
	g/l	40.6	Bromocresol Purple
	g/dl	4.06	
Alkaline Phosphatase	U/l	290	Diethanolamine buffer DEA 37°C
	U/l	209	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	38	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	102	Beckman Coulter - blocked pNPG7 37°C
	U/l	88	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	38	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	36	Beckman (Extinction Coefficient) 37°C
Bile Acids	µmol/l	24.6	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.20	
Bilirubin Total	µmol/l	30.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.81	
	µmol/l	31.2	DPD (Beckman AU)
	mg/dl	1.82	
Calcium	mmol/l	2.13	Cresolphthalein complexone
	mg/dl	8.54	
	mmol/l	2.14	Arsenazo III
	mg/dl	8.58	
Chloride	mmol/l	94.8	ISE indirect
Cholesterol	mmol/l	4.25	Cholesterol Oxidase - Abell Kendall
	mg/dl	164	
	mmol/l	4.41	Cholesterol Oxidase - IDMS
	mg/dl	170	
Cholinesterase	U/l	5630	Colorimetric Butrylthiocholine 37°C
CK Total	U/l	221	CK-NAC substrate start (DGKC) 37°C
	U/l	223	CK-NAC (IFCC) 37°C
	U/l	207	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	16.0	Colorimetric
	µg/dl	102	
Creatinine	µmol/l	139	Alkaline picrate no deproteinization
	mg/dl	1.58	
	µmol/l	148	Enzymatic UV method
	mg/dl	1.67	
	µmol/l	144	Jaffe rate blanked
	mg/dl	1.63	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Beckman Coulter AU Series® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Creatinine	µmol/l	154	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.74	
	µmol/l	140	IDMS traceable
	mg/dl	1.58	
gamma-GT	U/l	47	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	20	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.25	Hexokinase
	mg/dl	113	
	mmol/l	6.18	Glucose oxidase
	mg/dl	111	
Iron	µmol/l	21.0	Colorimetric with ppt.
	µg/dl	117	
	µmol/l	20.3	Colorimetric without ppt.
	µg/dl	113	
Lactate	mmol/l	1.58	Colorimetric Lactate Oxidase
	mg/dl	14.2	
LD (LDH)	U/l	199	L->P 37°C
	U/l	437	P->L Scandinavian & Dutch 37°C
	U/l	203	L->P IFCC 37°C
	U/l	188	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	30	Other Colorimetric 37°C
	U/l	43	Randox Colorimetric 37°C
Lithium	mmol/l	1.05	Spectrophotometric
	mg/dl	0.729	
Magnesium	mmol/l	0.899	Xylidyl Blue
	mg/dl	2.18	
Phosphate Inorganic	mmol/l	1.46	Phosphomolybdate UV
	mg/dl	4.53	
Potassium	mmol/l	3.95	ISE method - indirect
Protein Total	g/l	57.8	Biuret reaction end point
	g/dl	5.78	
Sodium	mmol/l	141	ISE method - indirect
TIBC	µmol/l	47.2	FE+UIBC(saturation with iron)
	µg/dl	264	
Triglycerides	mmol/l	1.11	Lipase/GPO-PAP no correction
	mg/dl	98.2	
	mmol/l	1.11	L/G Kinase EP. no correction
	mg/dl	98.2	
UIBC	µmol/l	26.4	Direct Colorimetric
	µg/dl	148	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Beckman Coulter AU Series® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Urea	mmol/l	7.77	Urease end point
	mg/dl	46.7	
	mmol/l	8.04	Urease kinetic
	mg/dl	48.3	
	mmol/l	8.04	BUN
	mg/dl	22.5	
Uric Acid (Urate)	mmol/l	0.366	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.15	
	mmol/l	0.365	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.13	
	mmol/l	0.360	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.05	
Zinc	µmol/l	30.0	Colorimetric without deprot.
	µg/dl	196	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Beckman DxC600/800® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	42.8	Bromocresol Purple
	g/dl	4.28	
Amylase Total	U/l	101	Beckman Synchron AMY7 37°C
Bilirubin Total	µmol/l	32.1	Diazo with Sulphanilic Acid
	mg/dl	1.88	
Calcium	mmol/l	2.09	Ion selective electrode
	mg/dl	8.38	
Chloride	mmol/l	96.0	ISE indirect
Cholesterol	mmol/l	4.23	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	
Creatinine	µmol/l	139	Alkaline picrate no deproteinization
	mg/dl	1.57	
Glucose	mmol/l	6.09	Glucose oxidase
	mg/dl	110	
Magnesium	mmol/l	0.924	Calmagite
	mg/dl	2.25	
Potassium	mmol/l	3.80	ISE method - indirect
Protein Total	g/l	58.9	Biuret reaction end point
	g/dl	5.89	
Sodium	mmol/l	141	ISE method - indirect
Triglycerides	mmol/l	1.13	Lipase/GPO-PAP no correction
	mg/dl	100	
Uric Acid (Urate)	mmol/l	0.351	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	



## CALIBRATION SERUM LEVEL 2 (CAL 2)

Biotechnica/Wiener BT and CB Series Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	39.0	Bromocresol Green
	g/dl	3.90	
ALT (GPT)	U/l	37	Tris buffer without P5P 37°C
	U/l	27	Tris buffer without P5P 30°C
	U/l	21	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	
Calcium	mmol/l	2.18	Arsenazo III
	mg/dl	8.74	
Cholesterol	mmol/l	4.21	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	
Glucose	mmol/l	6.08	Glucose oxidase
	mg/dl	110	
Iron	µmol/l	20.1	Colorimetric without ppt.
	µg/dl	112	
Phosphate Inorganic	mmol/l	1.58	Phosphomolybdate UV
	mg/dl	4.90	
Protein Total	g/l	59.4	Biuret reaction end point
	g/dl	5.94	
Urea	mmol/l	8.25	Urease kinetic
	mg/dl	49.6	
	mmol/l	8.25	BUN
	mg/dl	23.1	
Uric Acid (Urate)	mmol/l	0.371	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.23	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

COBAS INTEGRA® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	42.1	Bromocresol Green
	g/dl	4.21	
	g/l	37.4	Turbidimetric Assays
	g/dl	3.74	
Alkaline Phosphatase	U/l	178	Roche Integra AMP buffer 37°C
	U/l	139	Roche Integra AMP buffer 30°C
	U/l	114	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	Tris buffer without P5P 37°C
	U/l	24	Tris buffer without P5P 30°C
	U/l	19	Tris buffer without P5P 25°C
Amylase Total	U/l	97	BM/Roche Colorimetric pNPG7 37°C
	U/l	98	Roche Integra 2-chloro-pNPG7 37°C
	U/l	98	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	Tris buffer without P5P 37°C
	U/l	22	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	
	µmol/l	20.1	Diazo with Sulphanilic Acid
	mg/dl	1.18	
Bilirubin Total	µmol/l	20.2	Roche DPD JG standardised
	mg/dl	1.18	
	µmol/l	27.4	Diazo with Sulphanilic Acid
	mg/dl	1.60	
Bilirubin Total	µmol/l	27.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	
	µmol/l	27.2	Diazonium ion
	mg/dl	1.59	
Calcium	mmol/l	2.11	Cresolphthalein complexone
	mg/dl	8.46	
	mmol/l	2.09	NM-BAPTA
	mg/dl	8.38	
Chloride	mmol/l	95.8	ISE indirect
Cholesterol	mmol/l	4.20	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	
	mmol/l	4.22	Cholesterol Oxidase - IDMS
	mg/dl	163	
CK Total	U/l	198	CK-NAC (IFCC) 37°C
	U/l	124	CK-NAC (IFCC) 30°C
	U/l	84	CK-NAC (IFCC) 25°C

## CALIBRATION SERUM LEVEL 2 (CAL 2)

COBAS INTEGRA® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Creatinine	µmol/l	136	Alkaline picrate with deproteinization
	mg/dl	1.54	
	µmol/l	141	Alkaline picrate no deproteinization
	mg/dl	1.59	
	µmol/l	146	Roche Creatinine Plus
	mg/dl	1.65	
µmol/l	164	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	1.85		
gamma-GT	U/l	42	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	33	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	26	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.36	Hexokinase
	mg/dl	115	
Iron	µmol/l	20.3	Colorimetric with ppt.
	µg/dl	113	
	µmol/l	20.3	Colorimetric without ppt.
	µg/dl	113	
Lactate	mmol/l	1.69	Colorimetric Lactate Oxidase
	mg/dl	15.2	
LD (LDH)	U/l	215	L->P IFCC 37°C
	U/l	155	L->P IFCC 30°C
	U/l	109	L->P IFCC 25°C
Lipase	U/l	34	Roche Colorimetric 37°C
Magnesium	mmol/l	0.903	Xylidyl Blue
	mg/dl	2.19	
	mmol/l	0.901	Chlorphosphonazo III
	mg/dl	2.19	
Phosphate Inorganic	mmol/l	1.51	Phosphomolybdate enzymatic
	mg/dl	4.68	
	mmol/l	1.51	Phosphomolybdate UV
	mg/dl	4.68	
Potassium	mmol/l	3.96	ISE method - indirect
Protein Total	g/l	55.7	Biuret reaction end point
	g/dl	5.57	
	g/l	56.2	Biuret reaction kinetic
	g/dl	5.62	
Sodium	mmol/l	141	ISE method - indirect

## CALIBRATION SERUM LEVEL 2 (CAL 2)

COBAS INTEGRA® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
TIBC	µmol/l	43.3	FE+UIBC(saturation with iron)
	µg/dl	242	
Triglycerides	mmol/l	1.13	Lipase/GPO-PAP no correction
	mg/dl	100	
UIBC	µmol/l	23.6	Direct Colorimetric
	µg/dl	132	
Urea	mmol/l	7.49	Urease kinetic
	mg/dl	45.0	
	mmol/l	7.49	BUN
Uric Acid (Urate)	mmol/l	0.366	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.15	
	mmol/l	0.367	Uricase peroxidase no ascorbate oxidase
mg/dl	6.17		
	mmol/l	0.366	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.15	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Elitech/Vitalab Selectra Series Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.5	Bromocresol Green
	g/dl	4.15	
ALT (GPT)	U/l	39	Tris buffer without P5P 37°C
AST (GOT)	U/l	39	Tris buffer without P5P 37°C
Calcium	mmol/l	2.19	Arsenazo III
	mg/dl	8.78	
Cholesterol	mmol/l	4.38	Cholesterol Oxidase - Abell Kendall
	mg/dl	169	
CK Total	U/l	231	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	122	Alkaline picrate no deproteinization
	mg/dl	1.38	
	µmol/l	140	Creatinine PAP method
	mg/dl	1.58	
Glucose	mmol/l	6.77	Glucose oxidase
	mg/dl	122	
Urea	mmol/l	7.80	Urease kinetic
	mg/dl	46.9	
	mmol/l	7.80	BUN
	mg/dl	21.8	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	38.1	Bromocresol Green
	g/dl	3.81	
Alkaline Phosphatase	U/l	195	AMP optimised to IFCC 37°C
	U/l	152	AMP optimised to IFCC 30°C
	U/l	125	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	Tris buffer without P5P 37°C
	U/l	30	Tris buffer without P5P 30°C
	U/l	23	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	Tris buffer without P5P 37°C
	U/l	28	Tris buffer without P5P 30°C
	U/l	20	Tris buffer without P5P 25°C
Calcium	mmol/l	2.10	Arsenazo III
	mg/dl	8.42	
Cholesterol	mmol/l	4.20	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	
CK Total	U/l	213	CK-NAC (IFCC) 37°C
	U/l	133	CK-NAC (IFCC) 30°C
	U/l	91	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	136	Alkaline picrate no deproteinization
	mg/dl	1.54	
gamma-GT	U/l	47	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.01	Glucose oxidase
	mg/dl	108	
Iron	µmol/l	22.5	Colorimetric without ppt.
	µg/dl	125	
Magnesium	mmol/l	0.926	Xylidyl Blue
	mg/dl	2.25	
Phosphate Inorganic	mmol/l	1.46	Phosphomolybdate UV
	mg/dl	4.53	
Potassium	mmol/l	3.91	ISE method - direct
Protein Total	g/l	58.2	Biuret reaction end point
	g/dl	5.82	
Sodium	mmol/l	140	ISE method - direct
Triglycerides	mmol/l	1.12	Lipase/GPO-PAP no correction
	mg/dl	99.1	
Urea	mmol/l	7.81	Urease kinetic
	mg/dl	46.9	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Urea	mmol/l	7.81	BUN
	mg/dl	21.9	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

MINDRAY BS-200/300/400 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.0	Bromocresol Green
	g/dl	4.10	
Alkaline Phosphatase	U/l	267	Diethanolamine buffer DEA 37°C
	U/l	208	Diethanolamine buffer DEA 30°C
	U/l	171	Diethanolamine buffer DEA 25°C
	U/l	204	AMP optimised to IFCC 37°C
	U/l	159	AMP optimised to IFCC 30°C
	U/l	130	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	Tris buffer without P5P 37°C
	U/l	30	Tris buffer without P5P 30°C
	U/l	23	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	Tris buffer without P5P 37°C
	U/l	26	Tris buffer without P5P 30°C
	U/l	18	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	
	µmol/l	21.0	Oxidation to Biliverdin/Vanadate
	mg/dl	1.23	
Bilirubin Total	µmol/l	29.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	
	µmol/l	31.4	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	
Calcium	mmol/l	2.17	Arsenazo III
	mg/dl	8.70	
Cholesterol	mmol/l	4.22	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	
	mmol/l	4.29	Cholesterol Oxidase - IDMS
	mg/dl	166	
CK Total	U/l	206	CK-NAC (IFCC) 37°C
	U/l	129	CK-NAC (IFCC) 30°C
	U/l	88	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	Alkaline picrate no deproteinization
	mg/dl	1.46	
	µmol/l	147	Creatinine PAP method
	mg/dl	1.66	
gamma-GT	U/l	46	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C



## CALIBRATION SERUM LEVEL 2 (CAL 2)

MINDRAY BS-200/300/400 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Glucose	mmol/l	6.08	Hexokinase
	mg/dl	110	
	mmol/l	6.59	Glucose oxidase
	mg/dl	119	
Iron	µmol/l	20.5	Colorimetric without ppt.
	µg/dl	115	
LD (LDH)	U/l	432	P->L German methods 37°C
	U/l	312	P->L German methods 30°C
	U/l	219	P->L German methods 25°C
	U/l	406	P->L SFBC 37°C
	U/l	293	P->L SFBC 30°C
	U/l	206	P->L SFBC 25°C
	U/l	219	L->P IFCC 37°C
	U/l	158	L->P IFCC 30°C
	U/l	111	L->P IFCC 25°C
Lipase	U/l	36	Other Colorimetric 37°C
Magnesium	mmol/l	0.936	Xylidyl Blue
	mg/dl	2.27	
Phosphate Inorganic	mmol/l	1.59	Phosphomolybdate UV
	mg/dl	4.93	
Protein Total	g/l	59.1	Biuret reaction end point
	g/dl	5.91	
Triglycerides	mmol/l	1.12	Lipase/GPO-PAP no correction
	mg/dl	99.1	
Urea	mmol/l	7.98	Urease kinetic
	mg/dl	48.0	
	mmol/l	7.98	BUN
Uric Acid (Urate)	mmol/l	0.350	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	
	mmol/l	0.362	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas 6000 c501 e601 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.6	Bromocresol Green
	g/dl	4.16	
	g/l	40.0	Turbidimetric Assays
	g/dl	4.00	
Alkaline Phosphatase	U/l	178	Roche Integra AMP buffer 37°C
	U/l	139	Roche Integra AMP buffer 30°C
	U/l	114	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	Tris buffer without P5P 37°C
	U/l	26	Tris buffer without P5P 30°C
	U/l	20	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	Roche EPS Liquid 37°C
Amylase Total	U/l	96	Roche Integra 2-chloro-pNPG7 37°C
	U/l	96	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	Tris buffer without P5P 37°C
	U/l	22	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.9	Colorimetric
	mmol/l	13.8	Enzymatic
Bile Acids	µmol/l	24.5	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	
	µmol/l	20.4	Diazo with Sulphanilic Acid
	mg/dl	1.19	
	µmol/l	20.8	Roche DPD JG standardised
	mg/dl	1.22	
Bilirubin Total	µmol/l	25.9	Diazo with Sulphanilic Acid
	mg/dl	1.52	
	µmol/l	26.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	
	µmol/l	25.9	Diazonium ion
	mg/dl	1.52	
Calcium	mmol/l	2.12	Cresolphthalein complexone
	mg/dl	8.50	
	mmol/l	2.12	NM-BAPTA
	mg/dl	8.50	
Chloride	mmol/l	92.6	ISE indirect
Cholesterol	mmol/l	4.27	Cholesterol Oxidase - Abell Kendall
	mg/dl	165	
	mmol/l	4.29	Cholesterol Oxidase - IDMS
	mg/dl	166	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas 6000 c501 e601 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Cholinesterase	U/l	5547	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	CK-NAC substrate start (DGKC) 37°C
	U/l	125	CK-NAC substrate start (DGKC) 30°C
	U/l	85	CK-NAC substrate start (DGKC) 25°C
	U/l	200	CK-NAC (IFCC) 37°C
	U/l	125	CK-NAC (IFCC) 30°C
	U/l	85	CK-NAC (IFCC) 25°C
	U/l	215	Creatinine phosphate substrate Start 37°C
	U/l	135	Creatinine phosphate substrate Start 30°C
	U/l	91	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	143	Alkaline picrate no deproteinization
	mg/dl	1.61	
	µmol/l	149	Roche Creatinine Plus
	mg/dl	1.68	
	µmol/l	169	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.91	
gamma-GT	µmol/l	162	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.83	
	U/l	41	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	32	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	25	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	19	Triethanolamine buffer 50 mmol 37°C
Glucose	U/l	15	Triethanolamine buffer 50 mmol 30°C
	U/l	12	Triethanolamine buffer 50 mmol 25°C
	mmol/l	6.21	Hexokinase
Iron	mg/dl	112	
	µmol/l	20.0	Colorimetric with ppt.
	µg/dl	112	
	µmol/l	20.0	Colorimetric without ppt.
Lactate	µg/dl	112	
	mmol/l	1.67	Colorimetric Lactate Oxidase
LD (LDH)	mg/dl	15.0	
	U/l	204	L->P 37°C
	U/l	147	L->P 30°C
	U/l	103	L->P 25°C
	U/l	209	L->P IFCC 37°C
	U/l	151	L->P IFCC 30°C
Lipase	U/l	106	L->P IFCC 25°C
	U/l	34	Roche Colorimetric 37°C

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas 6000 c501 e601 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Lithium	mmol/l	1.04	Spectrophotometric
	mg/dl	0.722	
Magnesium	mmol/l	0.900	Xylidyl Blue
	mg/dl	2.19	
	mmol/l	0.905	Chlorphosphonazo III
	mg/dl	2.20	
Phosphate Inorganic	mmol/l	1.45	Phosphomolybdate enzymatic
	mg/dl	4.50	
	mmol/l	1.45	Phosphomolybdate UV
	mg/dl	4.50	
Potassium	mmol/l	4.01	ISE method - indirect
Protein Total	g/l	57.5	Biuret reaction end point
	g/dl	5.75	
Sodium	mmol/l	142	ISE method - indirect
TIBC	µmol/l	41.8	FE+UIBC(saturation with iron)
	µg/dl	234	
	µmol/l	49.4	Calculated from Transferrin
	µg/dl	276	
Triglycerides	mmol/l	1.14	Lipase/GPO-PAP no correction
	mg/dl	101	
	mmol/l	1.14	L/G Kinase EP. no correction
	mg/dl	101	
Urea	mmol/l	7.81	Urease kinetic
	mg/dl	46.9	
	mmol/l	7.81	BUN
	mg/dl	21.9	
Uric Acid (Urate)	mmol/l	0.353	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	
	mmol/l	0.355	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	
	mmol/l	0.354	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas C111® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	42.5	Bromocresol Green
	g/dl	4.25	
Alkaline Phosphatase	U/l	173	Roche Integra AMP buffer 37°C
	U/l	135	Roche Integra AMP buffer 30°C
	U/l	111	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	Tris buffer without P5P 37°C
	U/l	24	Tris buffer without P5P 30°C
	U/l	19	Tris buffer without P5P 25°C
Amylase Total	U/l	98	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	Tris buffer without P5P 37°C
	U/l	23	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.1	Roche DPD JG standardised
	mg/dl	1.17	
Bilirubin Total	µmol/l	27.4	Diazo with Sulphanilic Acid
	mg/dl	1.60	
	µmol/l	26.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	
	µmol/l	27.4	Diazonium ion
	mg/dl	1.60	
Calcium	mmol/l	2.13	NM-BAPTA
	mg/dl	8.54	
Cholesterol	mmol/l	4.22	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	
	mmol/l	4.19	Cholesterol Oxidase - IDMS
mg/dl	162		
CK Total	U/l	193	CK-NAC (IFCC) 37°C
	U/l	121	CK-NAC (IFCC) 30°C
	U/l	82	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	144	Roche Creatinine Plus
	mg/dl	1.63	
Glucose	mmol/l	6.39	Hexokinase
	mg/dl	115	
LD (LDH)	U/l	211	L->P IFCC 37°C
	U/l	152	L->P IFCC 30°C
	U/l	107	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	1.52	Phosphomolybdate UV
	mg/dl	4.71	
Protein Total	g/l	59.2	Biuret reaction end point
	g/dl	5.92	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas C111® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	1.13	Lipase/GPO-PAP no correction
	mg/dl	100	
Urea	mmol/l	7.37	Urease kinetic
	mg/dl	44.3	
	mmol/l	7.37	BUN
	mg/dl	20.6	
Uric Acid (Urate)	mmol/l	0.359	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	
	mmol/l	0.356	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas C311® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.6	Bromocresol Green
	g/dl	4.16	
Alkaline Phosphatase	U/l	175	Roche Integra AMP buffer 37°C
	U/l	136	Roche Integra AMP buffer 30°C
	U/l	112	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	Tris buffer without P5P 37°C
	U/l	27	Tris buffer without P5P 30°C
	U/l	20	Tris buffer without P5P 25°C
Amylase Total	U/l	97	BM/Roche Colorimetric pNPG7 37°C
	U/l	98	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	Tris buffer without P5P 37°C
	U/l	23	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	21.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	
	µmol/l	21.5	Roche DPD JG standardised
	mg/dl	1.26	
Bilirubin Total	µmol/l	25.3	Diazo with Sulphanilic Acid
	mg/dl	1.48	
	µmol/l	26.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	
	µmol/l	26.6	Diazonium ion
	mg/dl	1.56	
Calcium	mmol/l	2.15	Cresolphthalein complexone
	mg/dl	8.62	
	mmol/l	2.14	NM-BAPTA
	mg/dl	8.58	
Chloride	mmol/l	92.5	ISE indirect
Cholesterol	mmol/l	4.32	Cholesterol Oxidase - Abell Kendall
	mg/dl	167	
	mmol/l	4.33	Cholesterol Oxidase - IDMS
	mg/dl	167	
CK Total	U/l	206	CK-NAC (IFCC) 37°C
	U/l	129	CK-NAC (IFCC) 30°C
	U/l	88	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	151	Roche Creatinine Plus
	mg/dl	1.70	
	µmol/l	169	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.91	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas C311® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
gamma-GT	U/l	41	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	32	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	25	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	47	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.25	Hexokinase
	mg/dl	113	
	mmol/l	6.25	Glucose oxidase
	mg/dl	113	
Iron	µmol/l	20.1	Colorimetric with ppt.
	µg/dl	112	
	µmol/l	19.7	Colorimetric without ppt.
	µg/dl	110	
Lactate	mmol/l	1.68	Colorimetric Lactate Oxidase
	mg/dl	15.1	
LD (LDH)	U/l	212	L->P IFCC 37°C
	U/l	153	L->P IFCC 30°C
	U/l	107	L->P IFCC 25°C
Lipase	U/l	35	Roche Colorimetric 37°C
Magnesium	mmol/l	0.894	Xylidyl Blue
	mg/dl	2.17	
	mmol/l	0.897	Chlorphosphonazo III
	mg/dl	2.18	
Phosphate Inorganic	mmol/l	1.47	Phosphomolybdate UV
	mg/dl	4.56	
Potassium	mmol/l	4.01	ISE method - indirect
Protein Total	g/l	57.8	Biuret reaction end point
	g/dl	5.78	
Sodium	mmol/l	142	ISE method - indirect
Triglycerides	mmol/l	1.14	Lipase/GPO-PAP no correction
	mg/dl	101	
	mmol/l	1.12	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	
Urea	mmol/l	7.99	Urease kinetic
	mg/dl	48.0	
	mmol/l	7.99	BUN
	mg/dl	22.4	
Uric Acid (Urate)	mmol/l	0.362	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	
	mmol/l	0.362	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	
	mmol/l	0.359	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	6.03		



## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas c701 / c702 / c711 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.4	Bromocresol Green
	g/dl	4.14	
	g/l	40.4	Bromocresol Purple
	g/dl	4.04	
	g/l	40.0	Turbidimetric Assays
g/dl	4.00		
Alkaline Phosphatase	U/l	171	Roche Integra AMP buffer 37°C
	U/l	133	Roche Integra AMP buffer 30°C
	U/l	109	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	Tris buffer without P5P 37°C
	U/l	26	Tris buffer without P5P 30°C
	U/l	20	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	Roche EPS Liquid 37°C
Amylase Total	U/l	96	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	Tris buffer without P5P 37°C
	U/l	23	Tris buffer without P5P 30°C
	U/l	16	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	Enzymatic
Bile Acids	µmol/l	24.9	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	
	µmol/l	20.4	Diazo with Sulphanilic Acid
	mg/dl	1.19	
	µmol/l	20.5	Roche DPD JG standardised
	mg/dl	1.20	
µmol/l	16.5	Oxidation to Biliverdin/Vanadate	
mg/dl	0.963		
Bilirubin Total	µmol/l	25.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	
	µmol/l	25.8	Diazonium ion
mg/dl	1.51		
Calcium	mmol/l	2.12	Cresolphthalein complexone
	mg/dl	8.50	
	mmol/l	2.11	NM-BAPTA
	mg/dl	8.46	
Chloride	mmol/l	93.1	ISE indirect
Cholesterol	mmol/l	4.26	Cholesterol Oxidase - Abell Kendall
	mg/dl	164	
	mmol/l	4.28	Cholesterol Oxidase - IDMS
	mg/dl	165	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas c701 / c702 / c711 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
CK Total	U/l	204	CK-NAC (IFCC) 37°C
	U/l	128	CK-NAC (IFCC) 30°C
	U/l	87	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	151	Roche Creatinine Plus
	mg/dl	1.70	
	µmol/l	173	Jaffe rate blanked comp. (-26 µmol/l)
gamma-GT	U/l	41	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	32	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	25	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	Hexokinase
	mg/dl	111	
Iron	µmol/l	19.4	Colorimetric with ppt.
	µg/dl	109	
	µmol/l	19.3	Colorimetric without ppt.
Lactate	µg/dl	108	
	mmol/l	1.66	Colorimetric Lactate Oxidase
	mg/dl	15.0	
	LD (LDH)	U/l	209
U/l		151	L->P IFCC 30°C
U/l		106	L->P IFCC 25°C
Lithium	mmol/l	1.09	Spectrophotometric
	mg/dl	0.757	
Magnesium	mmol/l	0.916	Xylidyl Blue
	mg/dl	2.23	
Phosphate Inorganic	mmol/l	1.45	Phosphomolybdate UV
	mg/dl	4.50	
Potassium	mmol/l	4.03	ISE method - indirect
Protein Total	g/l	57.0	Biuret reaction end point
	g/dl	5.70	
Sodium	mmol/l	142	ISE method - indirect
TIBC	µmol/l	44.8	FE+UIBC(saturation with iron)
	µg/dl	250	
Triglycerides	mmol/l	1.12	Lipase/GPO-PAP no correction
	mg/dl	99.1	
	mmol/l	1.10	L/G Kinase EP. no correction
	mg/dl	97.4	
	Urea	mmol/l	7.68
mg/dl		46.2	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Roche Cobas c701 / c702 / c711 Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Urea	mmol/l	7.68	BUN
	mg/dl	21.5	
Uric Acid (Urate)	mmol/l	0.350	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	
	mmol/l	0.352	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	
	mmol/l	0.352	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

RX SERIES® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Creatinine	µmol/l	137	Alkaline picrate no deproteinization
	mg/dl	1.55	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	39.5	Bromocresol Green
	g/dl	3.95	
	g/l	42.0	Bromocresol Purple
	g/dl	4.20	
Alkaline Phosphatase	U/l	179	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	Tris buffer without P5P 37°C
Amylase Total	U/l	98	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.5	Enzymatic
Bile Acids	µmol/l	27.7	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.3	Oxidation to Biliverdin/Vanadate
	mg/dl	1.07	
Bilirubin Total	µmol/l	31.6	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	
Calcium	mmol/l	2.07	Cresolphthalein complexone
	mg/dl	8.30	
	mmol/l	2.16	Arsenazo III
mg/dl	8.66		
Chloride	mmol/l	96.2	ISE indirect
Cholesterol	mmol/l	4.36	Cholesterol Oxidase - Abell Kendall
	mg/dl	168	
CK Total	U/l	215	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	143	Enzymatic UV method
	mg/dl	1.61	
	µmol/l	163	
mg/dl	1.84		
gamma-GT	U/l	42	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.17	Hexokinase
	mg/dl	111	
	mmol/l	6.30	Glucose oxidase
mg/dl	114		
Iron	µmol/l	19.6	Colorimetric without ppt.
	µg/dl	110	
Lactate	mmol/l	1.54	Colorimetric Lactate Oxidase
	mg/dl	13.9	
LD (LDH)	U/l	413	P->L German methods 37°C
	U/l	211	L->P IFCC 37°C
Lipase	U/l	41	Other Colorimetric 37°C
Magnesium	mmol/l	0.858	Xylidyl Blue
	mg/dl	2.08	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	1.48	Phosphomolybdate UV
	mg/dl	4.59	
Potassium	mmol/l	4.02	ISE method - indirect
Protein Total	g/l	57.6	Biuret reaction end point
	g/dl	5.76	
Sodium	mmol/l	143	ISE method - indirect
TIBC	µmol/l	45.3	Calculated from Transferrin
	µg/dl	253	
Triglycerides	mmol/l	1.19	Lipase/GPO-PAP no correction
	mg/dl	105	
Urea	mmol/l	8.22	Urease kinetic
	mg/dl	49.4	
	mmol/l	8.22	BUN
	mg/dl	23.0	
Uric Acid (Urate)	mmol/l	0.368	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.18	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Siemens Atellica Solution Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	39.8	Bromocresol Green
	g/dl	3.98	
	g/l	40.8	Bromocresol Purple
	g/dl	4.08	
Alkaline Phosphatase	U/l	175	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	Tris buffer without P5P 37°C
Amylase Total	U/l	106	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	38	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.7	Enzymatic
Bilirubin Direct	µmol/l	18.2	Oxidation to Biliverdin/Vanadate
	mg/dl	1.06	
Bilirubin Total	µmol/l	31.5	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	
Calcium	mmol/l	2.12	Cresolphthalein complexone
	mg/dl	8.50	
	mmol/l	2.15	Arsenazo III
	mg/dl	8.62	
Chloride	mmol/l	98.0	ISE indirect
Cholesterol	mmol/l	4.31	Cholesterol Oxidase - Abell Kendall
	mg/dl	166	
	mmol/l	4.26	Cholesterol Oxidase - IDMS
	mg/dl	164	
CK Total	U/l	200	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	142	Alkaline picrate no deproteinization
	mg/dl	1.60	
	µmol/l	163	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.84	
gamma-GT	U/l	45	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.18	Hexokinase
	mg/dl	111	
	mmol/l	6.34	Glucose oxidase
	mg/dl	114	
Iron	µmol/l	19.4	Colorimetric without ppt.
	µg/dl	109	
LD (LDH)	U/l	207	L->P IFCC 37°C
Lipase	U/l	38	Other Colorimetric 37°C
Lithium	mmol/l	1.09	Spectrophotometric
	mg/dl	0.757	
Magnesium	mmol/l	0.848	Xylidyl Blue
	mg/dl	2.06	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

Siemens Atellica Solution Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	1.47	Phosphomolybdate UV
	mg/dl	4.56	
Potassium	mmol/l	3.89	ISE method - indirect
Protein Total	g/l	57.7	Biuret reaction end point
	g/dl	5.77	
Sodium	mmol/l	141	ISE method - indirect
TIBC	µmol/l	49.2	Direct Colorimetric
	µg/dl	275	
Triglycerides	mmol/l	1.20	Lipase/GPO-PAP no correction
	mg/dl	106	
Urea	mmol/l	8.19	Urease kinetic
	mg/dl	49.2	
	mmol/l	8.19	BUN
	mg/dl	22.9	
Uric Acid (Urate)	mmol/l	0.365	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.13	



## CALIBRATION SERUM LEVEL 2 (CAL 2)

SIEMENS DIMENSION EXL® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Albumin	g/l	41.5	Bromocresol Purple
	g/dl	4.15	
Alkaline Phosphatase	U/l	177	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	42	Tris buffer with P5P 37°C
	U/l	45	Tris buffer with P5P NVKC 37°C
Amylase Total	U/l	103	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	Tris buffer with P5P 37°C
	U/l	50	Tris buffer with P5P NVKC 37°C
	U/l	49	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	14.4	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.841	
Bilirubin Total	µmol/l	29.8	Diazo with Sulphanilic Acid
	mg/dl	1.74	
Calcium	mmol/l	2.02	Cresolphthalein complexone
	mg/dl	8.10	
Chloride	mmol/l	95.7	ISE indirect
Cholesterol	mmol/l	3.79	Dimension-Siemens reagents
	mg/dl	146	
CK Total	U/l	198	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	145	Alkaline picrate no deproteinization
	mg/dl	1.64	
	µmol/l	147	
gamma-GT	U/l	52	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	57	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.38	Hexokinase
	mg/dl	115	
Iron	µmol/l	19.1	Colorimetric with ppt.
	µg/dl	107	
	µmol/l	19.2	Colorimetric without ppt.
	µg/dl	107	
LD (LDH)	U/l	203	L->P IFCC 37°C
Lipase	U/l	101	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.901	Methylthymol blue
	mg/dl	2.19	
Phosphate Inorganic	mmol/l	1.52	Phosphomolybdate enzymatic
	mg/dl	4.71	
	mmol/l	1.53	Phosphomolybdate UV
mg/dl	4.74		

## CALIBRATION SERUM LEVEL 2 (CAL 2)

SIEMENS DIMENSION EXL® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Potassium	mmol/l	3.93	ISE method - indirect
Protein Total	g/l	59.5	Biuret reaction end point
	g/dl	5.95	
Sodium	mmol/l	142	ISE method - indirect
Triglycerides	mmol/l	1.07	Lipase/GPO-PAP no correction
	mg/dl	94.7	
Urea	mmol/l	7.95	Urease kinetic
	mg/dl	47.8	
	mmol/l	7.95	BUN
	mg/dl	22.3	
Uric Acid (Urate)	mmol/l	0.358	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	
	mmol/l	0.355	Spectrophotometric at 280-290
	mg/dl	5.96	

## CALIBRATION SERUM LEVEL 2 (CAL 2)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1578UN Cat. No. CAL2350

Size 20 x 5ml Expiry 2024-07-28

Analyte	unit	Target	methods
Alkaline Phosphatase	U/l	181	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	46	Tris buffer with P5P 37°C
Amylase Total	U/l	104	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	Tris buffer with P5P 37°C
Bilirubin Total	µmol/l	29.1	Diazo with Sulphanilic Acid
	mg/dl	1.70	
Chloride	mmol/l	94.7	ISE indirect
Cholesterol	mmol/l	3.86	Dimension-Siemens reagents
	mg/dl	149	
Creatinine	µmol/l	147	Alkaline picrate no deproteinization
	mg/dl	1.66	
gamma-GT	U/l	52	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.39	Hexokinase
	mg/dl	115	
Potassium	mmol/l	3.92	ISE method - indirect
Protein Total	g/l	60.4	Biuret reaction end point
	g/dl	6.04	
Sodium	mmol/l	141	ISE method - indirect
Triglycerides	mmol/l	1.08	Lipase/GPO-PAP no correction
	mg/dl	95.6	
Urea	mmol/l	8.03	Urease kinetic
	mg/dl	48.3	
	mmol/l	8.03	BUN
Uric Acid (Urate)	mmol/l	0.359	Spectrophotometric at 280-290
	mg/dl	6.03	