

## CALIBRATION SERUM LEVEL 3 (CAL 3)

**CAT. NO.** CAL 235 I**LOT NO.** I260UE**SIZE:** 20 x 5ml**EXPIRY:** 2024-11-28**GTIN:** 05055273200966

### 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 5 ml 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 3  
Cat No. CAL 235 I 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 (25 µl - 30 µl) of 0.7M Acetic acid solution to 1 ml 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 3 days at 2 - 8°C and levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum be 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.

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## CALIBRATION SERUM LEVEL 3 (CAL 3)

METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
a-HBDH	U/l	394	Oxobutyrate < 10 mmol/l 37°C
	U/l	297	Oxobutyrate < 10 mmol/l 30°C
	U/l	223	Oxobutyrate < 10 mmol/l 25°C
Albumin	g/l	29.7	Bromocresol Green
	g/dl	2.97	
	g/l	27.9	Bromocresol Purple
	g/dl	2.79	
	g/l	29.3	Turbidimetric Assays
Alkaline Phosphatase	U/l	446	Diethanolamine buffer DEA 37°C
	U/l	347	Diethanolamine buffer DEA 30°C
	U/l	285	Diethanolamine buffer DEA 25°C
	U/l	354	AMP optimised to IFCC 37°C
	U/l	276	AMP optimised to IFCC 30°C
	U/l	226	AMP optimised to IFCC 25°C
	U/l	351	AMP non-optimised 37°C
	U/l	273	AMP non-optimised 30°C
	U/l	224	AMP non-optimised 25°C
	U/l	343	p-Nitrophenylphosphate AMP 37°C
	U/l	267	p-Nitrophenylphosphate AMP 30°C
	U/l	219	p-Nitrophenylphosphate AMP 25°C
ALT (GPT)	U/l	146	Colorimetric 37°C
	U/l	108	Colorimetric 30°C
	U/l	82	Colorimetric 25°C
	U/l	149	Tris buffer with P5P 37°C
	U/l	110	Tris buffer with P5P 30°C
	U/l	84	Tris buffer with P5P 25°C
	U/l	142	Tris buffer without P5P 37°C
	U/l	105	Tris buffer without P5P 30°C
	U/l	80	Tris buffer without P5P 25°C
	U/l	151	Phosphate buffer DGKC 37°C
	U/l	112	Phosphate buffer DGKC 30°C
	U/l	85	Phosphate buffer DGKC 25°C
	U/l	142	Tris buffer with P5P NVKC 37°C
	U/l	105	Tris buffer with P5P NVKC 30°C
	U/l	80	Tris buffer with P5P NVKC 25°C
	U/l	157	Tris buffer SCE 37°C
U/l	116	Tris buffer SCE 30°C	
U/l	88	Tris buffer SCE 25°C	

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METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods	
Amylase Pancreatic	U/l	249	Immuno-inhibition EPS substrate 37°C	
	U/l	241	Roche EPS Liquid 37°C	
	U/l	282	Randox Liquid Ethylidene pNPG7 37°C	
Amylase Total	U/l	294	pNP Maltotriose substrates 37°C	
	U/l	297	Siemens - blocked pNPG7 37°C	
	U/l	226	Randox Lyo. Ethylidene pNPG7 37°C	
	U/l	292	Randox Liquid Ethylidene pNPG7 37°C	
	U/l	283	Beckman Synchron CX4/CX5/CX7 37°C	
	U/l	324	Siemens - maltopenta/hexaoside 37°C	
	U/l	316	Siemens 2-chloro-pNP linked substrate 37°C	
	U/l	271	Roche Integra 2-chloro-pNPG7 37°C	
	U/l	178	Ortho Vitros Microslide Systems 37°C	
	U/l	270	Other Roche 2-chloro-pNPG7 37°C	
	U/l	267	Roche liquid stable pNPG7 37°C	
	U/l	324	Siemens 2-chloro-pNPG3 37°C	
	U/l	299	bioMerieux 2-chloro-pNPG3 37°C	
	U/l	285	Beckman Coulter - blocked pNPG7 37°C	
	U/l	290	Beckman Synchron AMY7 37°C	
	U/l	291	Agappe - CNPG3 37°C	
	U/l	286	I.L. 2-chloro-pNPG3 37°C	
	U/l	318	Abbott Architect IFCC Cal. 37°C	
	U/l	302	Abbott Architect Non-IFCC Cal. 37°C	
	U/l	276	Beckman CNPG3 (Extinction Coeff) 37°C	
	U/l	265	BM/Roche Colorimetric pNPG7 37°C	
	AST (GOT)	U/l	142	Colorimetric 37°C
		U/l	96	Colorimetric 30°C
U/l		68	Colorimetric 25°C	
U/l		154	Tris buffer with P5P 37°C	
U/l		104	Tris buffer with P5P 30°C	
U/l		73	Tris buffer with P5P 25°C	
U/l		139	Tris buffer without P5P 37°C	
U/l		94	Tris buffer without P5P 30°C	
U/l		66	Tris buffer without P5P 25°C	
U/l		142	Phosphate buffer DGKC 37°C	
U/l		96	Phosphate buffer DGKC 30°C	
U/l		68	Phosphate buffer DGKC 25°C	
U/l		139	Tris buffer with P5P NVKC 37°C	
U/l		94	Tris buffer with P5P NVKC 30°C	
U/l		66	Tris buffer with P5P NVKC 25°C	
U/l		147	Tris buffer SCE 37°C	
U/l		99	Tris buffer SCE 30°C	
U/l	70	Tris buffer SCE 25°C		
Bicarbonate	mmol/l	14.3	Colorimetric	

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Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Bicarbonate	mmol/l	14.1	Enzymatic
	mmol/l	14.5	Manometric
Bile Acids	µmol/l	44.5	Enzymatic Colorimetric
	µmol/l	44.9	4th Generation Colorimetric
	µmol/l	44.3	5th Generation Colorimetric
Bilirubin Direct	µmol/l	28.5	Diazo with Sulphanilic Acid
	mg/dl	1.67	
	µmol/l	28.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.66	
	µmol/l	30.2	Oxidation to Biliverdin/Vanadate
	mg/dl	1.77	
Bilirubin Total	µmol/l	82.6	Diazo with Dichloroaniline (DCA)
	mg/dl	4.83	
	µmol/l	80.0	Diazo with Sulphanilic Acid
	mg/dl	4.68	
	µmol/l	76.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.47	
	µmol/l	76.9	Nitrobenzenediazonium salt
	mg/dl	4.50	
	µmol/l	76.2	Diazonium ion
	mg/dl	4.46	
Calcium	mmol/l	3.08	Cresolphthalein complexone
	mg/dl	12.3	
	mmol/l	3.02	Ion selective electrode
	mg/dl	12.1	
	mmol/l	3.07	Methylthymol blue
	mg/dl	12.3	
	mmol/l	3.09	Arsenazo III
	mg/dl	12.4	
	mmol/l	3.09	Phosphonazo
	mg/dl	12.4	
Chloride	mmol/l	112	Colorimetric
	mmol/l	112	ISE indirect
	mmol/l	113	ISE direct
	mmol/l	125	Optical Fluorescence

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Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Cholesterol	mmol/l	7.62	Cholesterol Oxidase - Abell Kendall
	mg/dl	294	
	mmol/l	7.70	Cholesterol Oxidase - IDMS
	mg/dl	297	
	mmol/l	7.65	Cholesterol Dehydrogenase
	mg/dl	295	
Cholinesterase	U/l	4958	Colorimetric Benzoylcholine 37°C
	U/l	5018	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	508	CK-NAC substrate start (DGKC) 37°C
	U/l	318	CK-NAC substrate start (DGKC) 30°C
	U/l	216	CK-NAC substrate start (DGKC) 25°C
	U/l	515	CK-NAC (IFCC) 37°C
	U/l	322	CK-NAC (IFCC) 30°C
	U/l	219	CK-NAC (IFCC) 25°C
	U/l	561	Monothioglycerol 37°C
	U/l	351	Monothioglycerol 30°C
	U/l	238	Monothioglycerol 25°C
	U/l	514	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	322	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	218	Dithioerythritol (DTE) IFCC correlated 25°C
	U/l	514	Creatinine phosphate substrate Start 37°C
	U/l	322	Creatinine phosphate substrate Start 30°C
	U/l	218	Creatinine phosphate substrate Start 25°C
Copper	µmol/l	27.5	Atomic absorption
	µg/dl	175	
	µmol/l	25.7	Colorimetric
	µg/dl	163	
Creatinine	µmol/l	361	Alkaline picrate with deproteinization
	mg/dl	4.08	
	µmol/l	364	Alkaline picrate no deproteinization
	mg/dl	4.11	
	µmol/l	378	Enzymatic UV method
	mg/dl	4.27	
	µmol/l	377	Creatinine PAP method
	mg/dl	4.26	
	µmol/l	354	Jaffe rate blanked
	mg/dl	4.00	
	µmol/l	398	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	
	µmol/l	385	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.35	
	µmol/l	372	IDMS traceable
	mg/dl	4.20	

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METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
D-3-Hydroxybutyrate	mmol/l	1.19	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	170	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	134	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	105	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	164	Gamma glutamyl-4-nitroanilide 37°C
	U/l	129	Gamma glutamyl-4-nitroanilide 30°C
	U/l	101	Gamma glutamyl-4-nitroanilide 25°C
	U/l	177	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	173	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	136	DCL gamma glutamyl-3-carboxy-4-nitroanilide 30°C
	U/l	107	DCL gamma glutamyl-3-carboxy-4-nitroanilide 25°C
	U/l	191	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	151	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l	118	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	33	Triethanolamine buffer 50 mmol 37°C
	U/l	25	Triethanolamine buffer 50 mmol 30°C
	U/l	20	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.6	Glucose dehydrogenase
	mg/dl	281	
	mmol/l	15.5	Hexokinase
	mg/dl	279	
	mmol/l	15.3	Oxygen electrode
mg/dl	276		
Iron	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
	µmol/l	40.0	Colorimetric with ppt.
	µg/dl	224	
	µmol/l	40.2	Colorimetric without ppt.
µg/dl	225		
Lactate	mmol/l	5.53	Colorimetric Lactate Oxidase
	mg/dl	49.8	
	mmol/l	5.48	Enzymatic Electrode
	mg/dl	49.4	
	mmol/l	5.42	Ion selective electrode
mg/dl	48.8		
LD (LDH)	mmol/l	5.28	UV LDH
	mg/dl	47.6	
	U/l	364	L->P 37°C
	U/l	263	L->P 30°C
	U/l	185	L->P 25°C
LD (LDH)	U/l	759	P->L Scandinavian & Dutch 37°C
	U/l	548	P->L Scandinavian & Dutch 30°C
	U/l	385	P->L Scandinavian & Dutch 25°C

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METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
LD (LDH)	U/l	728	P->L German methods 37°C
	U/l	526	P->L German methods 30°C
	U/l	369	P->L German methods 25°C
	U/l	742	P->L SFBC 37°C
	U/l	536	P->L SFBC 30°C
	U/l	376	P->L SFBC 25°C
	U/l	370	L->P IFCC 37°C
	U/l	267	L->P IFCC 30°C
	U/l	188	L->P IFCC 25°C
Lipase	U/l	66	Roche Colorimetric 37°C
	U/l	65	Roche Turbidimetric with colipase 37°C
	U/l	81	Randox Colorimetric 37°C
Lithium	mmol/l	1.99	Flame photometry
	mg/dl	1.38	
	mmol/l	2.08	Ion selective electrode
	mg/dl	1.44	
	mmol/l	2.07	Spectrophotometric
mg/dl	1.44		
Magnesium	mmol/l	1.82	Arsenazo III
	mg/dl	4.42	
	mmol/l	1.82	Atomic absorption
	mg/dl	4.42	
	mmol/l	1.75	Calmagite
	mg/dl	4.25	
	mmol/l	1.82	Xylidyl Blue
	mg/dl	4.42	
	mmol/l	1.85	Methylthymol blue
mg/dl	4.50		
Osmolality	mmol/l	1.83	Chlorphosphonazo III
	mg/dl	4.45	
	mmol/l	1.85	Enzymatic
mg/dl	4.50		
Osmolality	mOsm/kg	343	Calculated
	mOsm/kg	376	Freezing point depression
Phosphate Inorganic	mmol/l	2.24	Phosphomolybdate enzymatic
	mg/dl	6.94	
	mmol/l	2.25	Phosphomolybdate UV
	mg/dl	6.98	
Potassium	mmol/l	6.25	Enzymatic
	mmol/l	5.83	Flame photometry
	mmol/l	6.00	ISE method - direct



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METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods	
Potassium	mmol/l	6.13	ISE method - indirect	
	mmol/l	6.18	Optical Fluorescence	
	mmol/l	5.72	Colorimetric	
Protein Total	g/l	44.8	Biuret reaction CX4/5/7	
	g/dl	4.48		
	g/l	46.3	Biuret reaction end point	
	g/dl	4.63		
	g/l	45.3	Biuret reaction kinetic	
Sodium	mmol/l	158	Enzymatic	
	mmol/l	155	Flame photometry	
	mmol/l	155	ISE method - direct	
	mmol/l	158	ISE method - indirect	
	mmol/l	157	Optical Fluorescence	
	mmol/l	152	Colorimetric	
TIBC	µmol/l	39.8	Removal of excess free iron	
	µg/dl	222		
	µmol/l	43.7	FE+UIBC(saturation with iron)	
	µg/dl	244		
	µmol/l	42.8	Direct Colorimetric	
	µg/dl	239		
Triglycerides	mmol/l	2.86	Lipase/GPO-PAP no correction	
	mg/dl	253		
	mmol/l	2.86	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	253		
	mmol/l	2.86	L/G Kinase EP. no correction	
	mg/dl	253		
Urea	mmol/l	2.88	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	255		
	mmol/l	2.87	Lipase/Glycerol Dehydrogenase	
	mg/dl	254		
	Urea	mmol/l	19.8	Urease end point
		mg/dl	119	
mmol/l		19.8	Urease kinetic	
mg/dl		119		
mmol/l		18.9	Urease hypochlorite	
Uric Acid (Urate)	mg/dl	114		
	mmol/l	19.8	BUN	
Uric Acid (Urate)	mg/dl	55.6		
	mmol/l	0.547	Uricase catalase 340nm	
Uric Acid (Urate)	mg/dl	9.19		
	mmol/l	0.547		

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METHOD Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.564	Reduction methods
	mg/dl	9.48	
	mmol/l	0.554	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	
	mmol/l	0.550	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	
mmol/l	0.546	Spectrophotometric at 280-290	
mg/dl	9.17		
Zinc	mmol/l	0.545	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	
	μmol/l	35.4	Atomic absorption
	μg/dl	231	
	μmol/l	33.7	Colorimetric with deproteinisation
	μg/dl	220	
μmol/l	35.8	Colorimetric without deprot.	
μg/dl	234		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods	
Albumin	g/l	28.8	Bromocresol Green	
	g/dl	2.88		
	g/l	28.0	Bromocresol Purple	
	g/dl	2.80		
Alkaline Phosphatase	U/l	340	AMP optimised to IFCC 37°C	
	U/l	340	AMP non-optimised 37°C	
	U/l	340	p-Nitrophenylphosphate AMP 37°C	
	U/l	333	Colorimetric 37°C	
ALT (GPT)	U/l	142	Tris buffer without P5P 37°C	
Amylase Pancreatic	U/l	246	Immuno-inhibition EPS substrate 37°C	
Amylase Total	U/l	315	Abbott Architect IFCC Cal. 37°C	
	U/l	303	Abbott Architect Non-IFCC Cal. 37°C	
AST (GOT)	U/l	131	Tris buffer without P5P 37°C	
Bile Acids	µmol/l	46.4	Enzymatic Colorimetric	
Bilirubin Direct	µmol/l	30.9	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.81		
	µmol/l	30.0	Diazo with Sulphanilic Acid	
	mg/dl	1.76		
Bilirubin Total	µmol/l	30.3	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.77		
Bilirubin Total	µmol/l	83.5	Diazo with Dichloroaniline (DCA)	
	mg/dl	4.88		
	µmol/l	83.3	Diazo with Sulphanilic Acid	
	mg/dl	4.87		
Calcium	µmol/l	86.1	Dichlorophenyl Diazonium (DPD)	
	mg/dl	5.04		
Calcium	µmol/l	84.6	Diazonium ion	
	mg/dl	4.95		
	Calcium	mmol/l	3.01	Cresolphthalein complexone
		mg/dl	12.1	
Chloride	mmol/l	3.03	Arsenazo III	
	mg/dl	12.1		
Chloride	mmol/l	113	ISE indirect	
Cholesterol	mmol/l	7.58	Cholesterol Oxidase - Abell Kendall	
	mg/dl	293		
	mmol/l	7.70	Cholesterol Oxidase - IDMS	
	mg/dl	297		
Cholesterol	mmol/l	7.61	Cholesterol Dehydrogenase	
	mg/dl	294		

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Abbott Alinity/ Architect c/ci Systems® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Cholinesterase	U/l	5877	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	529	CK-NAC serum start (DGKC) 37°C
	U/l	533	CK-NAC substrate start (DGKC) 37°C
	U/l	530	CK-NAC (IFCC) 37°C
	U/l	544	Monothioglycerol 37°C
	U/l	503	Creatinine phosphate substrate Start 37°C
	U/l	533	Abbott CK-NAC (IFCC) 37°C
Creatinine	µmol/l	386	Alkaline picrate with deproteinization
	mg/dl	4.36	
	µmol/l	388	Alkaline picrate no deproteinization
	mg/dl	4.38	
	µmol/l	385	Enzymatic UV method
	mg/dl	4.35	
gamma-GT	µmol/l	394	Jaffe rate blanked
	mg/dl	4.46	
	µmol/l	386	IDMS traceable
	mg/dl	4.37	
	U/l	174	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	171	Gamma glutamyl-4-nitroanilide 37°C
Glucose	U/l	174	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	176	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	mmol/l	15.6	Hexokinase
	mg/dl	281	
Iron	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
	µmol/l	42.8	Colorimetric with ppt.
	µg/dl	239	
Lactate	µmol/l	42.4	Colorimetric without ppt.
	µg/dl	237	
	mmol/l	5.79	Colorimetric Lactate Oxidase
	mg/dl	52.2	
LD (LDH)	U/l	356	L->P 37°C
	U/l	354	L->P IFCC 37°C
Lipase	U/l	56	Other Colorimetric 37°C
Lithium	mmol/l	2.05	Spectrophotometric
	mg/dl	1.42	
Magnesium	mmol/l	1.82	Arsenazo III
	mg/dl	4.42	
	mmol/l	1.81	Xylidyl Blue
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	1.84	Enzymatic
	mg/dl	4.47	
Phosphate Inorganic	mmol/l	2.22	Phosphomolybdate enzymatic
	mg/dl	6.88	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.22	Phosphomolybdate UV
	mg/dl	6.88	
Potassium	mmol/l	6.10	ISE method - indirect
Protein Total	g/l	46.8	Biuret reaction end point
	g/dl	4.68	
	g/l	46.5	Biuret reaction kinetic
	g/dl	4.65	
Sodium	mmol/l	157	ISE method - indirect
TIBC	µmol/l	45.6	FE+UIBC(saturation with iron)
	µg/dl	255	
	µmol/l	39.2	Calculated from Transferrin
	µg/dl	219	
Triglycerides	mmol/l	2.87	Lipase/GPO-PAP no correction
	mg/dl	254	
	mmol/l	2.95	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	261	
	mmol/l	2.89	L/G Kinase EP. no correction
	mg/dl	256	
	mmol/l	2.89	Lipase/Glycerol Dehydrogenase
	mg/dl	256	
Urea	mmol/l	20.4	Urease end point
	mg/dl	123	
	mmol/l	20.3	Urease kinetic
	mg/dl	122	
	mmol/l	20.3	BUN
	mg/dl	57.0	
Uric Acid (Urate)	mmol/l	0.551	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	
	mmol/l	0.551	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	
	mmol/l	0.555	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.32	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

ABX Pentra 400® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	28.7	Bromocresol Green
	g/dl	2.87	
Alkaline Phosphatase	U/l	346	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	153	Tris buffer without P5P 37°C
AST (GOT)	U/l	153	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	26.5	Diazo with Sulphanilic Acid
	mg/dl	1.55	
	µmol/l	27.4	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	
Bilirubin Total	µmol/l	89.9	Diazo with Dichloroaniline (DCA)
	mg/dl	5.26	
	µmol/l	87.3	Diazo with Sulphanilic Acid
	mg/dl	5.11	
Calcium	mmol/l	3.26	Arsenazo III
	mg/dl	13.1	
Chloride	mmol/l	114	ISE direct
Cholesterol	mmol/l	7.79	Cholesterol Oxidase - Abell Kendall
	mg/dl	301	
	mmol/l	7.85	Cholesterol Oxidase - IDMS
	mg/dl	303	
CK Total	U/l	527	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	363	Alkaline picrate no deproteinization
	mg/dl	4.10	
	µmol/l	362	Jaffe rate blanked
	mg/dl	4.09	
gamma-GT	U/l	171	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	179	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.1	Hexokinase
	mg/dl	290	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	39.3	Colorimetric without ppt.
	µg/dl	220	
LD (LDH)	U/l	711	P->L German methods 37°C
	U/l	377	L->P IFCC 37°C
Lipase	U/l	59	Other Colorimetric 37°C
Magnesium	mmol/l	1.70	Xylidyl Blue
	mg/dl	4.13	
Phosphate Inorganic	mmol/l	2.57	Phosphomolybdate UV
	mg/dl	7.97	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

ABX Pentra 400® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Potassium	mmol/l	5.91	ISE method - direct
Protein Total	g/l	48.3	Biuret reaction end point
	g/dl	4.83	
Sodium	mmol/l	156	ISE method - direct
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
Urea	mmol/l	18.6	Urease kinetic
	mg/dl	112	
	mmol/l	18.6	BUN
Uric Acid (Urate)	mg/dl	52.2	Uricase peroxidase with ascorbate oxidase
	mmol/l	0.534	
	mg/dl	8.97	
	mmol/l	0.541	
	mg/dl	9.09	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mmol/l	0.550	
	mg/dl	9.24	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	28.2	Bromocresol Green
	g/dl	2.82	
	g/l	28.1	Bromocresol Purple
	g/dl	2.81	
Alkaline Phosphatase	U/l	390	AMP optimised to IFCC 37°C
	U/l	378	AMP non-optimised 37°C
ALT (GPT)	U/l	154	Colorimetric 37°C
	U/l	150	Tris buffer without P5P 37°C
	U/l	164	Agappee - IFCC 37°C
	U/l	148	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	143	Beckman (Extinction Coefficient) 37°C
Amylase Pancreatic	U/l	245	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	288	pNP Maltotrioxide substrates 37°C
	U/l	288	Randox Liquid Ethylidene pNPG7 37°C
	U/l	283	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	278	bioMerieux 2-chloro-pNPG3 37°C
	U/l	284	Beckman Coulter - blocked pNPG7 37°C
	U/l	288	Beckman Synchron AMY7 37°C
	U/l	315	Agappee - CNPG3 37°C
	U/l	283	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	146	Colorimetric 37°C
	U/l	147	Tris buffer without P5P 37°C
	U/l	146	Agappee - IFCC 37°C
	U/l	147	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	140	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.8	Enzymatic
Bile Acids	µmol/l	46.2	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	22.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.30	
	µmol/l	27.2	Oxidation to Biliverdin/Vanadate
	mg/dl	1.59	
Bilirubin Total	µmol/l	22.0	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.29	
Bilirubin Total	µmol/l	84.8	Diazo with Dichloroaniline (DCA)
	mg/dl	4.96	
	µmol/l	84.1	Diazo with Sulphanilic Acid
	mg/dl	4.92	
	µmol/l	83.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.87	



## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	87.9	Diazonium ion
	mg/dl	5.14	
	µmol/l	88.5	Oxidation to Biliverdin/Vanadate
	mg/dl	5.18	
	µmol/l	83.2	DPD (Beckman AU)
	mg/dl	4.87	
Calcium	mmol/l	3.12	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.10	Ion selective electrode
	mg/dl	12.4	
	mmol/l	3.10	Arsenazo III
	mg/dl	12.4	
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.75	Cholesterol Oxidase - Abell Kendall
	mg/dl	299	
	mmol/l	7.85	Cholesterol Oxidase - IDMS
	mg/dl	303	
	mmol/l	7.71	Agappe - CHOD-PAP
	mg/dl	298	
	mmol/l	7.87	Cholesterol Dehydrogenase
	mg/dl	304	
Cholinesterase	U/l	4730	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	549	CK-NAC (IFCC) 37°C
	U/l	563	Monothioglycerol 37°C
	U/l	538	Agappe - IFCC/Kinetic 37°C
	U/l	557	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	25.6	Colorimetric
	µg/dl	163	
Creatinine	µmol/l	360	Alkaline picrate with deproteinization
	mg/dl	4.07	
	µmol/l	359	Alkaline picrate no deproteinization
	mg/dl	4.05	
	µmol/l	381	Enzymatic UV method
	mg/dl	4.30	
	µmol/l	385	Creatinine PAP method
	mg/dl	4.35	
	µmol/l	357	Jaffe rate blanked
mg/dl	4.04		
µmol/l	391	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	4.42		
µmol/l	385	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	4.35		
µmol/l	366	IDMS traceable	
mg/dl	4.13		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
D-3-Hydroxybutyrate	mmol/l	1.15	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	178	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	180	Gamma glutamyl-4-nitroanilide 37°C
	U/l	180	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	181	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	185	Agappe - Szasz Kinetic 37°C
	U/l	176	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	33	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.7	GOD/02-Beckman method
	mg/dl	283	
	mmol/l	15.7	Glucose dehydrogenase
	mg/dl	283	
	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
	mmol/l	16.2	Agappe - GOD-PAP
	mg/dl	292	
Iron	µmol/l	40.9	Colorimetric with ppt.
	µg/dl	229	
	µmol/l	40.7	Colorimetric without ppt.
	µg/dl	228	
Lactate	mmol/l	5.41	Colorimetric Lactate Oxidase
	mg/dl	48.7	
LD (LDH)	U/l	370	L->P 37°C
	U/l	796	P->L Scandinavian & Dutch 37°C
	U/l	789	P->L SFBC 37°C
	U/l	370	L->P IFCC 37°C
	U/l	364	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	60	Other Colorimetric 37°C
Lithium	mmol/l	2.12	Ion selective electrode
	mg/dl	1.47	
	mmol/l	2.04	Spectrophotometric
	mg/dl	1.42	
Magnesium	mmol/l	1.91	Arsenazo III
	mg/dl	4.64	
	mmol/l	1.83	Calmagite
	mg/dl	4.45	
	mmol/l	1.84	Xylidyl Blue
	mg/dl	4.47	
	mmol/l	1.82	Methylthymol blue
	mg/dl	4.42	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.21	Phosphomolybdate enzymatic
	mg/dl	6.85	
	mmol/l	2.24	Phosphomolybdate UV
	mg/dl	6.94	
	mmol/l	2.26	Beckman PHOSm (365nm)
	mg/dl	7.01	
Potassium	mmol/l	6.09	ISE method - indirect
Protein Total	g/l	44.8	Biuret reaction CX4/5/7
	g/dl	4.48	
	g/l	45.4	Biuret reaction end point
	g/dl	4.54	
	g/l	45.5	Biuret reaction kinetic
	g/dl	4.55	
Sodium	mmol/l	158	ISE method - indirect
TIBC	µmol/l	43.3	FE+UIBC(saturation with iron)
	µg/dl	242	
	µmol/l	42.5	Direct Colorimetric
	µg/dl	238	
Triglycerides	mmol/l	2.85	Lipase/GPO-PAP no correction
	mg/dl	252	
	mmol/l	2.93	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	259	
	mmol/l	2.86	L/G Kinase EP. no correction
	mg/dl	253	
	mmol/l	2.80	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	248	
mmol/l	2.81	Lipase/Glycerol Dehydrogenase	
mg/dl	249		
Urea	mmol/l	19.6	Beckman-Conductivity
	mg/dl	118	
	mmol/l	20.1	Urease end point
	mg/dl	121	
	mmol/l	20.2	Urease kinetic
	mg/dl	121	
mmol/l	19.6	Urease hypochlorite	
mg/dl	118		
Uric Acid (Urate)	mmol/l	0.566	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	
	mmol/l	0.567	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.558	Spectrophotometric at 280-290
	mg/dl	9.37	
	mmol/l	0.556	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	
Zinc	µmol/l	34.2	Colorimetric with deproteinisation
	µg/dl	223	
	µmol/l	33.9	Colorimetric without deprot.
	µg/dl	221	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman DxC600/800® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	28.5	Bromocresol Purple
	g/dl	2.85	
Alkaline Phosphatase	U/l	339	AMP optimised to IFCC 37°C
	U/l	367	AMP non-optimised 37°C
	U/l	350	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	136	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	298	Beckman Coulter - blocked pNPG7 37°C
	U/l	285	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	132	Beckman Mod. IFCC Ref. without P5P 37°C
Bilirubin Total	µmol/l	80.7	Diazo with Sulphanilic Acid
	mg/dl	4.72	
Calcium	mmol/l	3.05	Ion selective electrode
	mg/dl	12.2	
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.64	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	
Cholinesterase	U/l	4874	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	519	CK-NAC (IFCC) 37°C
	U/l	551	Monothioglycerol 37°C
	U/l	543	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	377	Alkaline picrate no deproteinization
	mg/dl	4.26	
	µmol/l	374	Jaffe rate blanked
	mg/dl	4.23	
µmol/l	378	IDMS traceable	
mg/dl	4.27		
gamma-GT	U/l	139	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.3	GOD/02-Beckman method
	mg/dl	276	
	mmol/l	15.5	
Iron	µmol/l	39.6	Colorimetric without ppt.
	µg/dl	221	
LD (LDH)	U/l	952	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	63	Other Colorimetric 37°C
Magnesium	mmol/l	1.81	Calmagite
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.29	Phosphomolybdate UV
	mg/dl	7.10	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman DxC600/800® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Potassium	mmol/l	6.06	ISE method - indirect
Protein Total	g/l	44.5	Biuret reaction CX4/5/7
	g/dl	4.45	
	g/l	46.4	Biuret reaction end point
	g/dl	4.64	
	g/l	44.4	Biuret reaction kinetic
	g/dl	4.44	
Sodium	mmol/l	156	ISE method - indirect
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
	mmol/l	2.89	L/G Kinase EP. no correction
	mg/dl	256	
Urea	mmol/l	19.9	Beckman-Conductivity
	mg/dl	120	
	mmol/l	20.4	Urease kinetic
	mg/dl	123	
	mmol/l	20.4	BUN
	mg/dl	57.3	
Uric Acid (Urate)	mmol/l	0.545	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A15 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	31.5	Bromocresol Green
	g/dl	3.15	
Alkaline Phosphatase	U/l	363	AMP optimised to IFCC 37°C
	U/l	283	AMP optimised to IFCC 30°C
	U/l	232	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	147	Tris buffer without P5P 37°C
	U/l	109	Tris buffer without P5P 30°C
	U/l	83	Tris buffer without P5P 25°C
AST (GOT)	U/l	151	Tris buffer without P5P 37°C
	U/l	102	Tris buffer without P5P 30°C
	U/l	72	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	82.9	Diazo with Sulphanilic Acid
	mg/dl	4.85	
	µmol/l	77.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.53	
Calcium	mmol/l	3.09	Arsenazo III
	mg/dl	12.4	
Cholesterol	mmol/l	7.64	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	
	mmol/l	7.64	Cholesterol Oxidase - IDMS
	mg/dl	295	
CK Total	U/l	568	CK-NAC (IFCC) 37°C
	U/l	356	CK-NAC (IFCC) 30°C
	U/l	241	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	365	Jaffe rate blanked
	mg/dl	4.12	
gamma-GT	U/l	180	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
LD (LDH)	U/l	719	P->L German methods 37°C
	U/l	519	P->L German methods 30°C
	U/l	365	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.32	Phosphomolybdate UV
	mg/dl	7.19	
Protein Total	g/l	48.7	Biuret reaction end point
	g/dl	4.87	
Triglycerides	mmol/l	2.81	Lipase/GPO-PAP no correction
	mg/dl	249	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A15 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	18.3	Urease end point
	mg/dl	110	
	mmol/l	18.6	Urease kinetic
	mg/dl	112	
Urea	mmol/l	18.6	BUN
	mg/dl	52.2	
Uric Acid (Urate)	mmol/l	0.562	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	
	mmol/l	0.564	Uricase peroxidase no ascorbate oxidase
mg/dl	9.48		



## CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A25 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	31.3	Bromocresol Green
	g/dl	3.13	
Alkaline Phosphatase	U/l	427	Diethanolamine buffer DEA 37°C
	U/l	333	Diethanolamine buffer DEA 30°C
	U/l	273	Diethanolamine buffer DEA 25°C
	U/l	370	AMP optimised to IFCC 37°C
	U/l	288	AMP optimised to IFCC 30°C
	U/l	236	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	152	Tris buffer without P5P 37°C
	U/l	112	Tris buffer without P5P 30°C
	U/l	86	Tris buffer without P5P 25°C
AST (GOT)	U/l	150	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	71	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	81.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.77	
Cholesterol	mmol/l	7.66	Cholesterol Oxidase - Abell Kendall
	mg/dl	296	
	mmol/l	7.29	Cholesterol Oxidase - IDMS
	mg/dl	281	
Creatinine	µmol/l	323	Alkaline picrate no deproteinization
	mg/dl	3.65	
	µmol/l	342	Jaffe rate blanked
	mg/dl	3.86	
gamma-GT	U/l	178	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	140	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	Glucose oxidase
	mg/dl	277	
LD (LDH)	U/l	744	P->L German methods 37°C
	U/l	537	P->L German methods 30°C
	U/l	377	P->L German methods 25°C
Protein Total	g/l	48.2	Biuret reaction end point
	g/dl	4.82	
Triglycerides	mmol/l	2.77	Lipase/GPO-PAP no correction
	mg/dl	245	
	mmol/l	2.80	L/G Kinase EP. no correction
	mg/dl	248	
Urea	mmol/l	17.4	Urease end point
	mg/dl	104	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A25 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	18.5	Urease kinetic
	mg/dl	111	
	mmol/l	18.5	BUN
	mg/dl	51.9	
Uric Acid (Urate)	mmol/l	0.556	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	
	mmol/l	0.565	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Biotechnica/Wiener BT and CB Series Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.1	Bromocresol Green
	g/dl	3.01	
Alkaline Phosphatase	U/l	515	Diethanolamine buffer DEA 37°C
	U/l	401	Diethanolamine buffer DEA 30°C
	U/l	329	Diethanolamine buffer DEA 25°C
	U/l	353	AMP optimised to IFCC 37°C
	U/l	275	AMP optimised to IFCC 30°C
	U/l	226	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	143	Tris buffer without P5P 37°C
	U/l	106	Tris buffer without P5P 30°C
	U/l	81	Tris buffer without P5P 25°C
AST (GOT)	U/l	145	Tris buffer without P5P 37°C
	U/l	98	Tris buffer without P5P 30°C
	U/l	69	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	26.6	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	
Bilirubin Total	µmol/l	76.4	Diazo with Sulphanilic Acid
	mg/dl	4.47	
Calcium	mmol/l	3.07	Cresolphthalein complexone
	mg/dl	12.3	
	mmol/l	2.99	Arsenazo III
	mg/dl	12.0	
Chloride	mmol/l	112	Colorimetric
Cholesterol	mmol/l	7.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	
	mmol/l	7.75	Cholesterol Oxidase - IDMS
	mg/dl	299	
Cholinesterase	U/l	4966	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	538	CK-NAC (IFCC) 37°C
	U/l	337	CK-NAC (IFCC) 30°C
	U/l	229	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	355	Alkaline picrate no deproteinization
	mg/dl	4.01	
	µmol/l	371	Creatinine PAP method
	mg/dl	4.19	
	µmol/l	351	Jaffe rate blanked
	mg/dl	3.96	
	µmol/l	387	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Biotechnica/Wiener BT and CB Series Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
gamma-GT	U/l	167	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	165	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	130	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	Glucose oxidase
	mg/dl	276	
Iron	µmol/l	36.2	Colorimetric with ppt.
	µg/dl	202	
	µmol/l	35.8	Colorimetric without ppt.
	µg/dl	200	
LD (LDH)	U/l	705	P->L Scandinavian & Dutch 37°C
	U/l	509	P->L Scandinavian & Dutch 30°C
	U/l	357	P->L Scandinavian & Dutch 25°C
	U/l	652	P->L German methods 37°C
	U/l	471	P->L German methods 30°C
	U/l	331	P->L German methods 25°C
	U/l	760	P->L SFBC 37°C
	U/l	549	P->L SFBC 30°C
	U/l	385	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	2.35	Phosphomolybdate UV
	mg/dl	7.29	
Potassium	mmol/l	6.02	ISE method - direct
Protein Total	g/l	50.7	Biuret reaction end point
	g/dl	5.07	
Sodium	mmol/l	156	ISE method - direct
Triglycerides	mmol/l	2.80	Lipase/GPO-PAP no correction
	mg/dl	248	
Urea	mmol/l	19.6	Urease kinetic
	mg/dl	118	
	mmol/l	19.6	BUN
Uric Acid (Urate)	mg/dl	55.0	
	mmol/l	0.562	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	
	mmol/l	0.549	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	
	mmol/l	0.552	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	9.27		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
	g/l	29.4	Turbidimetric Assays
	g/dl	2.94	
Alkaline Phosphatase	U/l	333	Roche Integra AMP buffer 37°C
	U/l	259	Roche Integra AMP buffer 30°C
	U/l	213	Roche Integra AMP buffer 25°C
	U/l	331	AMP optimised to IFCC 37°C
	U/l	258	AMP optimised to IFCC 30°C
	U/l	212	AMP optimised to IFCC 25°C
	U/l	336	Colorimetric 37°C
	U/l	262	Colorimetric 30°C
ALT (GPT)	U/l	135	Tris buffer without P5P 37°C
	U/l	100	Tris buffer without P5P 30°C
	U/l	76	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	251	Immunoinhibition EPS substrate 37°C
	U/l	248	Roche EPS Liquid 37°C
Amylase Total	U/l	273	Roche Integra 2-chloro-pNPG7 37°C
	U/l	273	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	135	Tris buffer without P5P 37°C
	U/l	91	Tris buffer without P5P 30°C
	U/l	64	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.6	Enzymatic
Bilirubin Direct	µmol/l	28.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	
	µmol/l	28.8	Diazo with Sulphanilic Acid
	mg/dl	1.69	
	µmol/l	28.8	Roche DPD JG standardised
	mg/dl	1.68	
	µmol/l	28.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	
Bilirubin Total	µmol/l	75.1	Diazo with Dichloroaniline (DCA)
	mg/dl	4.40	
Bilirubin Total	µmol/l	76.1	Diazo with Sulphanilic Acid
	mg/dl	4.45	
	µmol/l	75.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.38	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	75.6	Diazonium ion
	mg/dl	4.42	
Calcium	mmol/l	3.09	Cresolphthalein complexone
	mg/dl	12.4	
	mmol/l	3.13	Arsenazo III
	mg/dl	12.5	
mmol/l	3.10	NM-BAPTA	
mg/dl	12.4		
Chloride	mmol/l	114	ISE indirect
Cholesterol	mmol/l	7.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	
	mmol/l	7.57	Cholesterol Oxidase - IDMS
	mg/dl	292	
Cholinesterase	U/l	5114	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	497	CK-NAC serum start (DGKC) 37°C
	U/l	311	CK-NAC serum start (DGKC) 30°C
	U/l	211	CK-NAC serum start (DGKC) 25°C
	U/l	520	CK-NAC substrate start (DGKC) 37°C
	U/l	326	CK-NAC substrate start (DGKC) 30°C
	U/l	221	CK-NAC substrate start (DGKC) 25°C
	U/l	509	CK-NAC (IFCC) 37°C
	U/l	319	CK-NAC (IFCC) 30°C
	U/l	216	CK-NAC (IFCC) 25°C
	U/l	502	Creatinine phosphate substrate Start 37°C
	U/l	314	Creatinine phosphate substrate Start 30°C
	U/l	213	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	367	Alkaline picrate with deproteinization
	mg/dl	4.15	
	µmol/l	369	Alkaline picrate no deproteinization
	mg/dl	4.17	
	µmol/l	373	Roche Creatinine Plus
	mg/dl	4.22	
	µmol/l	353	Jaffe rate blanked
	mg/dl	3.99	
µmol/l	384	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	4.34		
µmol/l	377	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	4.26		
µmol/l	373	IDMS traceable	
mg/dl	4.22		
gamma-GT	U/l	174	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	137	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	107	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
gamma-GT	U/l	181	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	Hexokinase
	mg/dl	285	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	41.6	Colorimetric with ppt.
	µg/dl	233	
	µmol/l	40.9	Colorimetric without ppt.
	µg/dl	229	
Lactate	mmol/l	5.55	Colorimetric Lactate Oxidase
	mg/dl	50.0	
LD (LDH)	U/l	380	L->P 37°C
	U/l	274	L->P 30°C
	U/l	193	L->P 25°C
	U/l	379	L->P IFCC 37°C
	U/l	274	L->P IFCC 30°C
	U/l	192	L->P IFCC 25°C
Lipase	U/l	62	Roche Colorimetric 37°C
	U/l	63	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.05	Ion selective electrode
	mg/dl	1.42	
Magnesium	mmol/l	1.82	Xylidyl Blue
	mg/dl	4.42	
	mmol/l	1.81	Chlorphosphonazo III
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.25	Phosphomolybdate enzymatic
	mg/dl	6.98	
	mmol/l	2.30	Phosphomolybdate UV
	mg/dl	7.13	
Potassium	mmol/l	6.14	ISE method - indirect
Protein Total	g/l	43.8	Biuret reaction end point
	g/dl	4.38	
	g/l	43.7	Biuret reaction kinetic
	g/dl	4.37	
Sodium	mmol/l	157	ISE method - indirect
TIBC	µmol/l	44.3	FE+UIBC(saturation with iron)
	µg/dl	248	
Triglycerides	mmol/l	2.91	Lipase/GPO-PAP no correction
	mg/dl	258	
	mmol/l	2.88	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.89	L/G Kinase EP. no correction
	mg/dl	256	
	mmol/l	2.91	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	258	
	mmol/l	2.96	Lipase/Glycerol Dehydrogenase
	mg/dl	262	
Urea	mmol/l	18.8	Urease end point
	mg/dl	113	
	mmol/l	19.5	Urease kinetic
	mg/dl	117	
	mmol/l	19.5	BUN
	mg/dl	54.7	
Uric Acid (Urate)	mmol/l	0.558	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	
	mmol/l	0.559	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.39	
	mmol/l	0.559	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.39	



## CALIBRATION SERUM LEVEL 3 (CAL 3)

Elitech/Vitalab Selectra Series Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.7	Bromocresol Green
	g/dl	3.07	
Alkaline Phosphatase	U/l	490	Diethanolamine buffer DEA 37°C
	U/l	350	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	144	Tris buffer without P5P 37°C
AST (GOT)	U/l	147	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	75.5	Diazo with Sulphanilic Acid
	mg/dl	4.42	
Calcium	mmol/l	3.05	Arsenazo III
	mg/dl	12.2	
Cholesterol	mmol/l	7.60	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	
	mmol/l	7.57	Cholesterol Oxidase - IDMS
	mg/dl	292	
CK Total	U/l	526	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	379	Alkaline picrate no deproteinization
	mg/dl	4.29	
	µmol/l	372	Creatinine PAP method
	mg/dl	4.21	
	µmol/l	359	Jaffe rate blanked
	mg/dl	4.06	
gamma-GT	U/l	177	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.3	Hexokinase
	mg/dl	276	
	mmol/l	15.4	Glucose oxidase
	mg/dl	278	
Iron	µmol/l	36.1	Colorimetric without ppt.
	µg/dl	202	
LD (LDH)	U/l	361	L->P IFCC 37°C
Magnesium	mmol/l	1.70	Xylidyl Blue
	mg/dl	4.13	
Phosphate Inorganic	mmol/l	2.31	Phosphomolybdate UV
	mg/dl	7.16	
Protein Total	g/l	49.2	Biuret reaction end point
	g/dl	4.92	
Triglycerides	mmol/l	2.86	Lipase/GPO-PAP no correction
	mg/dl	253	
	mmol/l	2.84	L/G Kinase EP. no correction
	mg/dl	251	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Elitech/Vitalab Selectra Series Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	19.0	Urease end point
	mg/dl	114	
	mmol/l	19.4	Urease kinetic
	mg/dl	117	
mmol/l	19.4	BUN	
mg/dl	54.4		
Uric Acid (Urate)	mmol/l	0.532	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.94	
	mmol/l	0.638	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.7	
mmol/l	0.593	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	9.96		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

HITACHI SERIES® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.8	Bromocresol Green
	g/dl	3.08	
Alkaline Phosphatase	U/l	336	AMP optimised to IFCC 37°C
	U/l	262	AMP optimised to IFCC 30°C
	U/l	215	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	148	Tris buffer without P5P 37°C
	U/l	110	Tris buffer without P5P 30°C
	U/l	83	Tris buffer without P5P 25°C
Amylase Total	U/l	270	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.9	Diazo with Sulphanilic Acid
	mg/dl	1.69	
	µmol/l	27.0	Diazo with Dichloroaniline (DCA)
	mg/dl	1.58	
Bilirubin Total	µmol/l	81.7	Diazo with Dichloroaniline (DCA)
	mg/dl	4.78	
	µmol/l	87.7	Diazo with Sulphanilic Acid
	mg/dl	5.13	
	µmol/l	82.5	Dichlorophenyl Diazonium (DPD)
mg/dl	4.83		
Calcium	mmol/l	2.71	Cresolphthalein complexone
	mg/dl	10.9	
	mmol/l	3.10	Arsenazo III
	mg/dl	12.4	
Chloride	mmol/l	111	ISE indirect
Cholesterol	mmol/l	7.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	
	mmol/l	7.24	Cholesterol Dehydrogenase
	mg/dl	279	
CK Total	U/l	528	CK-NAC (IFCC) 37°C
	U/l	331	CK-NAC (IFCC) 30°C
	U/l	224	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	360	Alkaline picrate with deproteinization
	mg/dl	4.07	
	µmol/l	346	Alkaline picrate no deproteinization
	mg/dl	3.90	
	µmol/l	327	Jaffe rate blanked
	mg/dl	3.70	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

HITACHI SERIES® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
gamma-GT	U/l	170	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	134	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	105	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	Glucose oxidase
	mg/dl	283	
Iron	µmol/l	39.3	Colorimetric without ppt.
	µg/dl	220	
LD (LDH)	U/l	395	L->P IFCC 37°C
	U/l	285	L->P IFCC 30°C
	U/l	200	L->P IFCC 25°C
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
Phosphate Inorganic	mmol/l	2.31	Phosphomolybdate UV
	mg/dl	7.16	
Potassium	mmol/l	6.18	ISE method - indirect
Protein Total	g/l	46.3	Biuret reaction end point
	g/dl	4.63	
Sodium	mmol/l	158	ISE method - indirect
Triglycerides	mmol/l	2.77	Lipase/GPO-PAP no correction
	mg/dl	245	
Urea	mmol/l	20.1	Urease end point
	mg/dl	121	
	mmol/l	19.7	Urease kinetic
	mg/dl	118	
Uric Acid (Urate)	mmol/l	19.7	BUN
	mg/dl	55.3	
	mmol/l	0.547	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.19	
Uric Acid (Urate)	mmol/l	0.528	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.87	
	mmol/l	0.543	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	9.12		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

ILab 600®/650®/Aries/Taurus Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.4	Bromocresol Green
	g/dl	2.94	
Alkaline Phosphatase	U/l	372	AMP optimised to IFCC 37°C
	U/l	290	AMP optimised to IFCC 30°C
	U/l	238	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	136	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Amylase Total	U/l	285	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	134	Tris buffer without P5P 37°C
	U/l	91	Tris buffer without P5P 30°C
	U/l	64	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	82.2	Diazo with Sulphanilic Acid
	mg/dl	4.81	
	µmol/l	86.8	Dichlorophenyl Diazonium (DPD)
Calcium	mmol/l	3.13	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.06	Arsenazo III
Calcium	mg/dl	12.3	
Chloride	mmol/l	109	ISE indirect
Cholesterol	mmol/l	7.64	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	
Cholinesterase	U/l	5085	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	530	CK-NAC (IFCC) 37°C
	U/l	332	CK-NAC (IFCC) 30°C
	U/l	225	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	358	Alkaline picrate no deproteinization
	mg/dl	4.05	
	µmol/l	373	Enzymatic UV method
	mg/dl	4.22	
µmol/l	398	Creatinine PAP method	
mg/dl	4.50		
gamma-GT	U/l	168	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## CALIBRATION SERUM LEVEL 3 (CAL 3)

ILab 600®/650®/Aries/Taurus Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Glucose	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	40.0	Colorimetric without ppt.
	µg/dl	224	
LD (LDH)	U/l	739	P->L Scandinavian & Dutch 37°C
	U/l	534	P->L Scandinavian & Dutch 30°C
	U/l	375	P->L Scandinavian & Dutch 25°C
	U/l	731	P->L German methods 37°C
	U/l	528	P->L German methods 30°C
	U/l	371	P->L German methods 25°C
Lipase	U/l	64	Other Colorimetric 37°C
Magnesium	mmol/l	1.82	Xylidyl Blue
	mg/dl	4.42	
	mmol/l	1.85	Enzymatic
Phosphate Inorganic	mmol/l	2.30	Phosphomolybdate enzymatic
	mg/dl	7.13	
	mmol/l	2.18	Phosphomolybdate UV
mg/dl	6.76		
Potassium	mmol/l	6.14	ISE method - indirect
Protein Total	g/l	45.6	Biuret reaction end point
	g/dl	4.56	
Sodium	mmol/l	158	ISE method - indirect
Triglycerides	mmol/l	2.91	Lipase/GPO-PAP no correction
	mg/dl	258	
	mmol/l	2.90	L/G Kinase EP. no correction
mg/dl	257		
Urea	mmol/l	20.3	Urease end point
	mg/dl	122	
	mmol/l	20.3	Urease kinetic
	mg/dl	122	
mmol/l	20.3	BUN	
mg/dl	57.0		
Uric Acid (Urate)	mmol/l	0.520	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.74	
	mmol/l	0.557	Uricase peroxidase no ascorbate oxidase
mg/dl	9.36		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.6	Bromocresol Green
	g/dl	2.96	
Alkaline Phosphatase	U/l	322	AMP optimised to IFCC 37°C
	U/l	251	AMP optimised to IFCC 30°C
	U/l	206	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	182	Colorimetric 37°C
	U/l	135	Colorimetric 30°C
	U/l	102	Colorimetric 25°C
	U/l	146	Tris buffer without P5P 37°C
	U/l	108	Tris buffer without P5P 30°C
	U/l	82	Tris buffer without P5P 25°C
AST (GOT)	U/l	149	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	71	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.6	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	23.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.40	
	µmol/l	24.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.42	
Bilirubin Total	µmol/l	78.1	Diazo with Sulphanilic Acid
	mg/dl	4.57	
	µmol/l	75.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.44	
	µmol/l	76.4	Nitrobenzenediazonium salt
	mg/dl	4.47	
Calcium	mmol/l	3.22	Arsenazo III
	mg/dl	12.9	
Chloride	mmol/l	115	ISE direct
Cholesterol	mmol/l	7.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	
	mmol/l	7.94	Cholesterol Oxidase - IDMS
	mg/dl	306	
	mmol/l	7.57	Cholesterol Dehydrogenase
	mg/dl	292	
Creatinine	µmol/l	389	Enzymatic UV method
	mg/dl	4.40	
	µmol/l	378	Creatinine PAP method
	mg/dl	4.27	
	µmol/l	360	Jaffe rate blanked
	mg/dl	4.07	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Creatinine	µmol/l	397	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.49	
gamma-GT	U/l	170	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	Hexokinase
	mg/dl	284	
	mmol/l	15.4	Glucose oxidase
	mg/dl	278	
Iron	µmol/l	41.1	Colorimetric without ppt.
	µg/dl	230	
LD (LDH)	U/l	385	L->P IFCC 37°C
	U/l	278	L->P IFCC 30°C
	U/l	195	L->P IFCC 25°C
Magnesium	mmol/l	1.71	Xylidyl Blue
	mg/dl	4.16	
Phosphate Inorganic	mmol/l	2.32	Phosphomolybdate enzymatic
	mg/dl	7.19	
	mmol/l	2.32	Phosphomolybdate UV
	mg/dl	7.19	
Potassium	mmol/l	5.98	ISE method - direct
Protein Total	g/l	46.2	Biuret reaction end point
	g/dl	4.62	
Sodium	mmol/l	154	ISE method - direct
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
	mmol/l	2.93	Lipase/Glycerol Dehydrogenase
	mg/dl	259	
Urea	mmol/l	19.0	Urease end point
	mg/dl	114	
	mmol/l	18.9	Urease kinetic
	mg/dl	114	
	mmol/l	18.9	BUN
	mg/dl	53.0	
Uric Acid (Urate)	mmol/l	0.550	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	
	mmol/l	0.555	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	
	mmol/l	0.557	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	



## CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.4	Bromocresol Green
	g/dl	2.94	
	g/l	30.5	Agappe - Bromocresol Green
	g/dl	3.05	
Alkaline Phosphatase	U/l	450	Diethanolamine buffer DEA 37°C
	U/l	351	Diethanolamine buffer DEA 30°C
	U/l	288	Diethanolamine buffer DEA 25°C
	U/l	373	AMP optimised to IFCC 37°C
	U/l	291	AMP optimised to IFCC 30°C
	U/l	238	AMP optimised to IFCC 25°C
	U/l	359	Colorimetric 37°C
	U/l	280	Colorimetric 30°C
	U/l	229	Colorimetric 25°C
ALT (GPT)	U/l	147	Colorimetric 37°C
	U/l	109	Colorimetric 30°C
	U/l	83	Colorimetric 25°C
	U/l	154	Tris buffer without P5P 37°C
	U/l	114	Tris buffer without P5P 30°C
	U/l	87	Tris buffer without P5P 25°C
	U/l	152	Agappee - IFCC 37°C
	U/l	112	Agappee - IFCC 30°C
	U/l	86	Agappee - IFCC 25°C
Amylase Total	U/l	303	pNP Maltotrioxide substrates 37°C
	U/l	277	Agappe - CNPG3 37°C
AST (GOT)	U/l	141	Colorimetric 37°C
	U/l	95	Colorimetric 30°C
	U/l	67	Colorimetric 25°C
	U/l	147	Tris buffer without P5P 37°C
	U/l	99	Tris buffer without P5P 30°C
	U/l	70	Tris buffer without P5P 25°C
	U/l	140	Agappee - IFCC 37°C
	U/l	95	Agappee - IFCC 30°C
U/l	67	Agappee - IFCC 25°C	
Bicarbonate	mmol/l	14.6	Colorimetric
	mmol/l	14.0	Enzymatic
Bilirubin Total	µmol/l	85.9	Diazo with Dichloroaniline (DCA)
	mg/dl	5.02	
	µmol/l	83.9	Diazo with Sulphanilic Acid
	mg/dl	4.91	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	81.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.78	
	µmol/l	86.1	Diazonium ion
	mg/dl	5.04	
	µmol/l	81.7	Oxidation to Biliverdin/Vanadate
	mg/dl	4.78	
	µmol/l	84.1	Agappe - TAB
	mg/dl	4.92	
Calcium	mmol/l	3.04	Cresolphthalein complexone
	mg/dl	12.2	
	mmol/l	2.99	Ion selective electrode
	mg/dl	12.0	
	mmol/l	3.10	Arsenazo III
	mg/dl	12.4	
	mmol/l	3.00	Agappe - Arsenazo
	mg/dl	12.0	
Chloride	mmol/l	113	ISE direct
Cholesterol	mmol/l	7.58	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	
	mmol/l	7.57	Cholesterol Oxidase - IDMS
	mg/dl	292	
	mmol/l	7.49	Agappe - CHOD-PAP
	mg/dl	289	
	mmol/l	7.78	Cholesterol Dehydrogenase
	mg/dl	300	
Cholinesterase	U/l	5035	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	606	CK-NAC serum start (DGKC) 37°C
	U/l	379	CK-NAC serum start (DGKC) 30°C
	U/l	258	CK-NAC serum start (DGKC) 25°C
	U/l	476	CK-NAC substrate start (DGKC) 37°C
	U/l	298	CK-NAC substrate start (DGKC) 30°C
	U/l	202	CK-NAC substrate start (DGKC) 25°C
	U/l	539	CK-NAC (IFCC) 37°C
	U/l	337	CK-NAC (IFCC) 30°C
	U/l	229	CK-NAC (IFCC) 25°C
	Creatinine	µmol/l	351
mg/dl		3.97	
µmol/l		356	Alkaline picrate no deproteinization
mg/dl		4.02	
µmol/l		379	Enzymatic UV method
mg/dl		4.29	
µmol/l		379	Creatinine PAP method
mg/dl		4.28	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Creatinine	µmol/l	363	Jaffe rate blanked
	mg/dl	4.10	
	µmol/l	397	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.49	
	µmol/l	374	Agappe - Enzymatic
	mg/dl	4.22	
gamma-GT	U/l	177	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	139	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	109	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	176	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	180	Agappe - Szasz Kinetic 37°C
	U/l	142	Agappe - Szasz Kinetic 30°C
	U/l	111	Agappe - Szasz Kinetic 25°C
Glucose	mmol/l	15.3	Glucose dehydrogenase
	mg/dl	276	
	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.7	Glucose oxidase
	mg/dl	283	
	mmol/l	15.5	Agappe - GOD-PAP
	mg/dl	279	
Iron	µmol/l	37.2	Colorimetric with ppt.
	µg/dl	208	
	µmol/l	39.5	Colorimetric without ppt.
	µg/dl	221	
Lactate	mmol/l	5.76	Colorimetric Lactate Oxidase
	mg/dl	51.9	
LD (LDH)	U/l	817	P->L Scandinavian & Dutch 37°C
	U/l	590	P->L Scandinavian & Dutch 30°C
	U/l	414	P->L Scandinavian & Dutch 25°C
	U/l	765	P->L German methods 37°C
	U/l	552	P->L German methods 30°C
	U/l	388	P->L German methods 25°C
	U/l	713	P->L SFBC 37°C
	U/l	515	P->L SFBC 30°C
	U/l	361	P->L SFBC 25°C
	U/l	365	L->P IFCC 37°C
	U/l	264	L->P IFCC 30°C
	U/l	185	L->P IFCC 25°C
Magnesium	mmol/l	1.81	Xylidyl Blue
	mg/dl	4.40	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.11	Phosphomolybdate enzymatic
	mg/dl	6.54	
	mmol/l	2.13	Phosphomolybdate UV
	mg/dl	6.60	
Potassium	mmol/l	6.03	ISE method - direct
Protein Total	g/l	48.1	Biuret reaction end point
	g/dl	4.81	
	g/l	46.4	Biuret reaction kinetic
	g/dl	4.64	
	g/l	49.1	Agappe - Biuret
g/dl	4.91		
Sodium	mmol/l	158	ISE method - direct
TIBC	µmol/l	38.7	FE+UIBC(saturation with iron)
	µg/dl	216	
Triglycerides	mmol/l	2.81	Lipase/GPO-PAP no correction
	mg/dl	249	
	mmol/l	2.83	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	
	mmol/l	2.76	L/G Kinase EP. no correction
	mg/dl	244	
	mmol/l	2.84	Lipase/Glycerol Dehydrogenase
	mg/dl	251	
	mmol/l	2.80	Agappe - GPO - TOPS
	mg/dl	248	
Urea	mmol/l	20.0	Urease end point
	mg/dl	120	
	mmol/l	20.0	Urease kinetic
	mg/dl	120	
	mmol/l	20.3	Urease hypochlorite
	mg/dl	122	
	mmol/l	19.7	Agappe - Berthelot
	mg/dl	118	
mmol/l	20.0	BUN	
mg/dl	56.1		
Uric Acid (Urate)	mmol/l	0.544	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.14	
	mmol/l	0.545	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	
	mmol/l	0.544	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.14	
	mmol/l	0.574	Agappe - Uricase - PAP
	mg/dl	9.64	
mmol/l	0.556	Agappe - Uricase - TOPS	
mg/dl	9.34		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

PRESTIGE 24i Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.8	Bromocresol Green
	g/dl	2.98	
Alkaline Phosphatase	U/l	488	Diethanolamine buffer DEA 37°C
	U/l	380	Diethanolamine buffer DEA 30°C
	U/l	312	Diethanolamine buffer DEA 25°C
	U/l	344	AMP optimised to IFCC 37°C
	U/l	268	AMP optimised to IFCC 30°C
	U/l	220	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	152	Tris buffer without P5P 37°C
	U/l	112	Tris buffer without P5P 30°C
	U/l	86	Tris buffer without P5P 25°C
	U/l	156	Agappee - IFCC 37°C
	U/l	115	Agappee - IFCC 30°C
	U/l	88	Agappee - IFCC 25°C
AST (GOT)	U/l	148	Tris buffer without P5P 37°C
	U/l	100	Tris buffer without P5P 30°C
	U/l	70	Tris buffer without P5P 25°C
	U/l	131	Agappee - IFCC 37°C
	U/l	89	Agappee - IFCC 30°C
	U/l	62	Agappee - IFCC 25°C
Bilirubin Direct	µmol/l	31.2	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	
Bilirubin Total	µmol/l	85.1	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.98	
	µmol/l	90.4	Oxidation to Biliverdin/Vanadate
	mg/dl	5.29	
Calcium	mmol/l	3.03	Arsenazo III
	mg/dl	12.1	
Cholesterol	mmol/l	7.42	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	
	mmol/l	8.01	Cholesterol Oxidase - IDMS
	mg/dl	309	
CK Total	mmol/l	7.75	Agappee - CHOD-PAP
	mg/dl	299	
CK Total	U/l	504	CK-NAC (IFCC) 37°C
	U/l	316	CK-NAC (IFCC) 30°C
	U/l	214	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	326	Alkaline picrate no deproteinization
	mg/dl	3.68	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

PRESTIGE 24i Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Creatinine	µmol/l	356	Jaffe rate blanked
	mg/dl	4.02	
gamma-GT	U/l	163	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	181	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
	mmol/l	15.7	Agappe - GOD-PAP
	mg/dl	283	
Iron	µmol/l	39.5	Colorimetric without ppt.
	µg/dl	221	
LD (LDH)	U/l	755	P->L German methods 37°C
	U/l	545	P->L German methods 30°C
	U/l	383	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.09	Phosphomolybdate UV
	mg/dl	6.48	
Protein Total	g/l	46.9	Biuret reaction end point
	g/dl	4.69	
Triglycerides	mmol/l	2.79	Lipase/GPO-PAP no correction
	mg/dl	247	
	mmol/l	2.90	Agappe - GPO - TOPS
	mg/dl	257	
	Urea	mmol/l	19.4
mg/dl		117	
mmol/l		20.3	Agappe - Urease GLDH
mg/dl		122	
mmol/l		19.4	BUN
mg/dl		54.4	
Uric Acid (Urate)	mmol/l	0.574	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.64	
	mmol/l	0.534	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.97	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C111® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
Alkaline Phosphatase	U/l	333	Roche Integra AMP buffer 37°C
	U/l	259	Roche Integra AMP buffer 30°C
	U/l	213	Roche Integra AMP buffer 25°C
	U/l	326	AMP optimised to IFCC 37°C
	U/l	254	AMP optimised to IFCC 30°C
	U/l	208	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	133	Tris buffer without P5P 37°C
	U/l	98	Tris buffer without P5P 30°C
	U/l	75	Tris buffer without P5P 25°C
Amylase Total	U/l	275	Other Roche 2-chloro-pNPG7 37°C
	U/l	272	Roche liquid stable pNPG7 37°C
	U/l	284	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	135	Tris buffer without P5P 37°C
	U/l	91	Tris buffer without P5P 30°C
	U/l	64	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	30.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	
	µmol/l	27.9	Diazo with Sulphanilic Acid
	mg/dl	1.63	
	µmol/l	29.8	Roche DPD JG standardised
	mg/dl	1.74	
	µmol/l	30.1	Diazo with Dichloroaniline (DCA)
	mg/dl	1.76	
Bilirubin Total	µmol/l	75.9	Diazo with Dichloroaniline (DCA)
	mg/dl	4.44	
	µmol/l	74.1	Diazo with Sulphanilic Acid
	mg/dl	4.33	
	µmol/l	74.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.35	
	µmol/l	76.5	Diazonium ion
	mg/dl	4.47	
Calcium	mmol/l	3.13	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
	mmol/l	3.09	NM-BAPTA
	mg/dl	12.4	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C111® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	
	mmol/l	7.64	Cholesterol Oxidase - IDMS
	mg/dl	295	
CK Total	U/l	499	CK-NAC (IFCC) 37°C
	U/l	312	CK-NAC (IFCC) 30°C
	U/l	212	CK-NAC (IFCC) 25°C
	U/l	530	Creatinine phosphate substrate Start 37°C
	U/l	332	Creatinine phosphate substrate Start 30°C
	U/l	225	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	360	Alkaline picrate no deproteinization
	mg/dl	4.07	
	µmol/l	373	Roche Creatinine Plus
	mg/dl	4.21	
	µmol/l	359	Jaffe rate blanked
	mg/dl	4.06	
	µmol/l	376	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.25	
	µmol/l	389	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.40	
gamma-GT	U/l	169	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	133	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	173	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	Hexokinase
	mg/dl	285	
	mmol/l	15.5	Glucose oxidase
mg/dl	279		
Iron	µmol/l	41.2	Colorimetric without ppt.
	µg/dl	230	
LD (LDH)	U/l	375	L->P IFCC 37°C
	U/l	271	L->P IFCC 30°C
	U/l	190	L->P IFCC 25°C
Lipase	U/l	62	Roche Colorimetric 37°C
	U/l	61	Roche Turbidimetric with colipase 37°C
Magnesium	mmol/l	1.84	Xylidyl Blue
	mg/dl	4.47	
	mmol/l	1.81	Chlorphosphonazo III
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.25	Phosphomolybdate enzymatic
	mg/dl	6.98	



## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C111® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.28	Phosphomolybdate UV
	mg/dl	7.07	
Potassium	mmol/l	6.10	ISE method - indirect
Protein Total	g/l	45.9	Biuret reaction end point
	g/dl	4.59	
Sodium	mmol/l	153	ISE method - indirect
Triglycerides	mmol/l	2.90	Lipase/GPO-PAP no correction
	mg/dl	257	
	mmol/l	3.01	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	266	
	mmol/l	2.94	L/G Kinase EP. no correction
	mg/dl	260	
	mmol/l	2.87	Lipase/Glycerol Dehydrogenase
	mg/dl	254	
Urea	mmol/l	18.6	Urease end point
	mg/dl	112	
	mmol/l	19.3	Urease kinetic
	mg/dl	116	
	mmol/l	19.3	BUN
	mg/dl	54.2	
Uric Acid (Urate)	mmol/l	0.545	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.16	
	mmol/l	0.556	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	
	mmol/l	0.556	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c303/501/502/503 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
	g/l	29.8	Bromocresol Purple
	g/dl	2.98	
	g/l	28.1	Turbidimetric Assays
	g/dl	2.81	
Alkaline Phosphatase	U/l	330	Roche Integra AMP buffer 37°C
	U/l	257	Roche Integra AMP buffer 30°C
	U/l	211	Roche Integra AMP buffer 25°C
	U/l	333	AMP optimised to IFCC 37°C
	U/l	259	AMP optimised to IFCC 30°C
	U/l	213	AMP optimised to IFCC 25°C
	U/l	328	Colorimetric 37°C
	U/l	256	Colorimetric 30°C
	U/l	210	Colorimetric 25°C
ALT (GPT)	U/l	137	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	241	Immunoinhibition EPS substrate 37°C
	U/l	240	Roche EPS Liquid 37°C
Amylase Total	U/l	262	Randox Liquid Ethylidene pNPG7 37°C
	U/l	267	Roche Integra 2-chloro-pNPG7 37°C
	U/l	266	Other Roche 2-chloro-pNPG7 37°C
	U/l	266	Roche liquid stable pNPG7 37°C
	U/l	261	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	133	Tris buffer without P5P 37°C
	U/l	90	Tris buffer without P5P 30°C
	U/l	63	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	Colorimetric
	mmol/l	13.8	Enzymatic
Bile Acids	µmol/l	44.7	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	
	µmol/l	27.8	Diazo with Sulphanilic Acid
	mg/dl	1.62	
	µmol/l	28.4	Roche DPD JG standardised
	mg/dl	1.66	
	µmol/l	27.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c303/501/502/503 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	73.7	Diazo with Dichloroaniline (DCA)
	mg/dl	4.31	
	µmol/l	73.3	Diazo with Sulphanilic Acid
	mg/dl	4.29	
	µmol/l	73.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.31	
µmol/l	72.9	Nitrobenzenediazonium salt	
mg/dl	4.27		
Calcium	µmol/l	73.5	Diazonium ion
	mg/dl	4.30	
	mmol/l	3.11	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.17	Arsenazo III
	mg/dl	12.7	
mmol/l	3.11	NM-BAPTA	
mg/dl	12.5		
Chloride	mmol/l	110	ISE indirect
Cholesterol	mmol/l	7.63	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	
	mmol/l	7.62	Cholesterol Oxidase - IDMS
	mg/dl	294	
	mmol/l	7.69	Cholesterol Dehydrogenase
	mg/dl	297	
Cholinesterase	U/l	5023	Colorimetric Benzoylcholine 37°C
	U/l	4980	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	504	CK-NAC serum start (DGKC) 37°C
	U/l	316	CK-NAC serum start (DGKC) 30°C
	U/l	214	CK-NAC serum start (DGKC) 25°C
	U/l	499	CK-NAC substrate start (DGKC) 37°C
	U/l	312	CK-NAC substrate start (DGKC) 30°C
	U/l	212	CK-NAC substrate start (DGKC) 25°C
	U/l	509	CK-NAC (IFCC) 37°C
	U/l	319	CK-NAC (IFCC) 30°C
	U/l	216	CK-NAC (IFCC) 25°C
	U/l	509	Creatinine phosphate substrate Start 37°C
	U/l	319	Creatinine phosphate substrate Start 30°C
	U/l	216	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	374	Alkaline picrate no deproteinization
	mg/dl	4.22	
	µmol/l	380	Enzymatic UV method
	mg/dl	4.29	
	µmol/l	386	Creatinine PAP method
	mg/dl	4.36	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c303/501/502/503 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods	
Creatinine	µmol/l	384	Roche Creatinine Plus	
	mg/dl	4.34		
	µmol/l	372	Jaffe rate blanked	
	mg/dl	4.21		
	µmol/l	398	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	4.50		
	µmol/l	391	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	4.42		
	µmol/l	387	IDMS traceable	
	mg/dl	4.37		
	gamma-GT	U/l	163	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	128	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		101	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		181	Gamma glutamyl-4-nitroanilide 37°C	
U/l		143	Gamma glutamyl-4-nitroanilide 30°C	
U/l		112	Gamma glutamyl-4-nitroanilide 25°C	
U/l		182	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		143	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		112	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	15.3	Glucose dehydrogenase	
	mg/dl	276		
	mmol/l	15.4	Hexokinase	
	mg/dl	278		
	mmol/l	15.2	Glucose oxidase	
	mg/dl	274		
	Iron	µmol/l	40.3	Colorimetric with ppt.
		µg/dl	225	
µmol/l		40.4	Colorimetric without ppt.	
µg/dl		226		
Lactate	mmol/l	5.55	Colorimetric Lactate Oxidase	
	mg/dl	50.0		
LD (LDH)	U/l	376	L->P 37°C	
	U/l	271	L->P 30°C	
	U/l	191	L->P 25°C	
	U/l	374	L->P IFCC 37°C	
	U/l	270	L->P IFCC 30°C	
	U/l	190	L->P IFCC 25°C	
Lipase	U/l	66	Other Colorimetric 37°C	
	U/l	67	Roche Colorimetric 37°C	
	U/l	66	Roche Turbidimetric with colipase 37°C	
Lithium	mmol/l	2.10	Ion selective electrode	
	mg/dl	1.46		
	mmol/l	2.07	Spectrophotometric	
	mg/dl	1.44		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c303/501/502/503 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Magnesium	mmol/l	1.86	Arsenazo III
	mg/dl	4.52	
	mmol/l	1.81	Atomic absorption
	mg/dl	4.40	
	mmol/l	1.84	Xylidyl Blue
	mg/dl	4.47	
	mmol/l	1.85	Methylthymol blue
	mg/dl	4.50	
Phosphate Inorganic	mmol/l	1.84	Chlorphosphonazo III
	mg/dl	4.47	
	mmol/l	1.83	Enzymatic
	mg/dl	4.45	
Phosphate Inorganic	mmol/l	2.25	Phosphomolybdate enzymatic
	mg/dl	6.98	
	mmol/l	2.23	Phosphomolybdate UV
	mg/dl	6.91	
Potassium	mmol/l	6.16	ISE method - indirect
Protein Total	g/l	45.1	Biuret reaction end point
	g/dl	4.51	
	g/l	45.3	Biuret reaction kinetic
	g/dl	4.53	
Sodium	mmol/l	158	ISE method - indirect
TIBC	µmol/l	44.2	FE+UIBC(saturation with iron)
	µg/dl	247	
	µmol/l	44.3	Direct Colorimetric
	µg/dl	248	
	µmol/l	42.5	Calculated from Transferrin
	µg/dl	238	
Triglycerides	mmol/l	2.89	Lipase/GPO-PAP no correction
	mg/dl	256	
	mmol/l	2.90	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	257	
	mmol/l	2.88	L/G Kinase EP. no correction
	mg/dl	255	
	mmol/l	2.84	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	251	
	mmol/l	2.89	Lipase/Glycerol Dehydrogenase
	mg/dl	256	
Urea	mmol/l	20.0	Urease end point
	mg/dl	120	
	mmol/l	19.9	Urease kinetic
	mg/dl	120	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c303/501/502/503 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	19.9	BUN
	mg/dl	55.9	
Uric Acid (Urate)	mmol/l	0.538	Uricase catalase 340nm
	mg/dl	9.04	
	mmol/l	0.537	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.02	
	mmol/l	0.537	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.02	
	mmol/l	0.537	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.02	
Zinc	µmol/l	34.9	Colorimetric with deproteinisation
	µg/dl	228	
	µmol/l	34.7	Colorimetric without deprot.
	µg/dl	227	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.9	Bromocresol Green
	g/dl	3.09	
	g/l	31.0	Bromocresol Purple
	g/dl	3.10	
	g/l	31.3	Turbidimetric Assays
	g/dl	3.13	
Alkaline Phosphatase	U/l	327	Roche Integra AMP buffer 37°C
	U/l	255	Roche Integra AMP buffer 30°C
	U/l	209	Roche Integra AMP buffer 25°C
	U/l	320	AMP optimised to IFCC 37°C
	U/l	249	AMP optimised to IFCC 30°C
	U/l	204	AMP optimised to IFCC 25°C
	U/l	333	Colorimetric 37°C
	U/l	259	Colorimetric 30°C
	U/l	213	Colorimetric 25°C
ALT (GPT)	U/l	137	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	261	Immunoinhibition EPS substrate 37°C
	U/l	243	Roche EPS Liquid 37°C
Amylase Total	U/l	264	Roche Integra 2-chloro-pNPG7 37°C
	U/l	267	Other Roche 2-chloro-pNPG7 37°C
	U/l	269	Roche liquid stable pNPG7 37°C
	U/l	268	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	135	Tris buffer without P5P 37°C
	U/l	91	Tris buffer without P5P 30°C
	U/l	64	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.7	Enzymatic
Bilirubin Direct	µmol/l	26.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	
	µmol/l	27.4	Diazo with Sulphanilic Acid
	mg/dl	1.60	
	µmol/l	26.0	Roche DPD JG standardised
	mg/dl	1.52	
Bilirubin Total	µmol/l	73.8	Diazo with Sulphanilic Acid
	mg/dl	4.32	
	µmol/l	73.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.31	
	µmol/l	73.8	Diazonium ion
	mg/dl	4.32	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Calcium	mmol/l	3.10	Cresolphthalein complexone
	mg/dl	12.4	
	mmol/l	3.18	Arsenazo III
	mg/dl	12.7	
	mmol/l	3.11	NM-BAPTA
	mg/dl	12.5	
Chloride	mmol/l	110	ISE indirect
Cholesterol	mmol/l	7.66	Cholesterol Oxidase - Abell Kendall
	mg/dl	296	
	mmol/l	7.67	Cholesterol Oxidase - IDMS
	mg/dl	296	
	mmol/l	7.55	Cholesterol Dehydrogenase
	mg/dl	291	
Cholinesterase	U/l	4945	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	500	CK-NAC substrate start (DGKC) 37°C
	U/l	313	CK-NAC substrate start (DGKC) 30°C
	U/l	213	CK-NAC substrate start (DGKC) 25°C
	U/l	516	CK-NAC (IFCC) 37°C
	U/l	323	CK-NAC (IFCC) 30°C
	U/l	219	CK-NAC (IFCC) 25°C
	U/l	526	Creatinine phosphate substrate Start 37°C
	U/l	329	Creatinine phosphate substrate Start 30°C
	U/l	224	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	379	Alkaline picrate no deproteinization
	mg/dl	4.29	
	µmol/l	388	Enzymatic UV method
	mg/dl	4.38	
	µmol/l	379	Roche Creatinine Plus
	mg/dl	4.28	
	µmol/l	376	Jaffe rate blanked
	mg/dl	4.24	
	µmol/l	404	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.57	
µmol/l	402	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	4.54		
gamma-GT	µmol/l	378	IDMS traceable
	mg/dl	4.27	
	U/l	171	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	169	Gamma glutamyl-4-nitroanilide 37°C
	U/l	133	Gamma glutamyl-4-nitroanilide 30°C
	U/l	104	Gamma glutamyl-4-nitroanilide 25°C



## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
gamma-GT	U/l	182	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	Hexokinase
	mg/dl	279	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	40.0	Colorimetric with ppt.
	µg/dl	223	
	µmol/l	40.1	Colorimetric without ppt.
	µg/dl	224	
Lactate	mmol/l	5.58	Colorimetric Lactate Oxidase
	mg/dl	50.3	
LD (LDH)	U/l	373	L->P 37°C
	U/l	269	L->P 30°C
	U/l	189	L->P 25°C
	U/l	373	L->P IFCC 37°C
	U/l	269	L->P IFCC 30°C
	U/l	189	L->P IFCC 25°C
Lipase	U/l	65	Roche Colorimetric 37°C
	U/l	66	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.10	Spectrophotometric
	mg/dl	1.46	
Magnesium	mmol/l	1.82	Atomic absorption
	mg/dl	4.42	
	mmol/l	1.85	Xylidyl Blue
	mg/dl	4.50	
	mmol/l	1.82	Chlorphosphonazo III
	mg/dl	4.42	
Phosphate Inorganic	mmol/l	2.25	Phosphomolybdate enzymatic
	mg/dl	6.98	
	mmol/l	2.24	Phosphomolybdate UV
	mg/dl	6.94	
Potassium	mmol/l	6.14	ISE method - indirect
Protein Total	g/l	45.0	Biuret reaction end point
	g/dl	4.50	
	g/l	44.6	Biuret reaction kinetic
	g/dl	4.46	
Sodium	mmol/l	158	ISE method - indirect
TIBC	µmol/l	44.7	FE+UIBC(saturation with iron)
	µg/dl	250	
	µmol/l	45.4	Direct Colorimetric
	µg/dl	254	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods	
Triglycerides	mmol/l	2.89	Lipase/GPO-PAP no correction	
	mg/dl	256		
	mmol/l	2.89	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	256		
	mmol/l	2.88	L/G Kinase EP. no correction	
	mg/dl	255		
Urea	mmol/l	2.95	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	261		
	mmol/l	2.93	Lipase/Glycerol Dehydrogenase	
	mg/dl	259		
	Urea	mmol/l	20.2	Urease end point
		mg/dl	121	
mmol/l		20.0	Urease kinetic	
mg/dl		120		
mmol/l		20.0	BUN	
mg/dl		56.1		
Uric Acid (Urate)	mmol/l	0.551	Uricase catalase 340nm	
	mg/dl	9.26		
	mmol/l	0.541	Uricase peroxidase with ascorbate oxidase	
	mg/dl	9.09		
	mmol/l	0.545	Uricase peroxidase no ascorbate oxidase	
	mg/dl	9.16		
	mmol/l	0.542	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	9.11		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.8	Bromocresol Green
	g/dl	3.08	
Alkaline Phosphatase	U/l	317	Roche Integra AMP buffer 37°C
	U/l	247	Roche Integra AMP buffer 30°C
	U/l	203	Roche Integra AMP buffer 25°C
	U/l	316	Colorimetric 37°C
	U/l	246	Colorimetric 30°C
	U/l	202	Colorimetric 25°C
ALT (GPT)	U/l	139	Tris buffer without P5P 37°C
	U/l	103	Tris buffer without P5P 30°C
	U/l	78	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	242	Immunoinhibition EPS substrate 37°C
	U/l	238	Roche EPS Liquid 37°C
Amylase Total	U/l	263	Randox Liquid Ethylidene pNPG7 37°C
	U/l	266	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	135	Tris buffer without P5P 37°C
	U/l	91	Tris buffer without P5P 30°C
	U/l	64	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.4	Enzymatic
Bilirubin Direct	µmol/l	28.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	
	µmol/l	29.1	Roche DPD JG standardised
	mg/dl	1.70	
Bilirubin Total	µmol/l	73.6	Diazo with Sulphanilic Acid
	mg/dl	4.31	
	µmol/l	74.1	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.34	
	µmol/l	73.8	Diazonium ion
	mg/dl	4.32	
Calcium	mmol/l	3.08	Cresolphthalein complexone
	mg/dl	12.3	
	mmol/l	3.09	NM-BAPTA
	mg/dl	12.4	
Chloride	mmol/l	111	ISE indirect
Cholesterol	mmol/l	7.64	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	
	mmol/l	7.62	Cholesterol Oxidase - IDMS
	mg/dl	294	
Cholinesterase	U/l	4898	Colorimetric Butyrylthiocholine 37°C

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
CK Total	U/l	495	CK-NAC substrate start (DGKC) 37°C
	U/l	310	CK-NAC substrate start (DGKC) 30°C
	U/l	210	CK-NAC substrate start (DGKC) 25°C
	U/l	501	CK-NAC (IFCC) 37°C
	U/l	314	CK-NAC (IFCC) 30°C
	U/l	213	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	383	Enzymatic UV method
	mg/dl	4.33	
	µmol/l	383	Roche Creatinine Plus
	mg/dl	4.33	
	µmol/l	400	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.52	
gamma-GT	U/l	170	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	134	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	105	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	178	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	140	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	Hexokinase
	mg/dl	277	
Iron	µmol/l	38.9	Colorimetric without ppt.
	µg/dl	217	
Lactate	mmol/l	5.42	Colorimetric Lactate Oxidase
	mg/dl	48.8	
LD (LDH)	U/l	372	L->P IFCC 37°C
	U/l	269	L->P IFCC 30°C
	U/l	189	L->P IFCC 25°C
Lipase	U/l	68	Roche Colorimetric 37°C
Lithium	mmol/l	2.08	Spectrophotometric
	mg/dl	1.44	
Magnesium	mmol/l	1.86	Xylidyl Blue
	mg/dl	4.52	
	mmol/l	1.85	Chlorphosphonazo III
Phosphate Inorganic	mg/dl	4.50	
	mmol/l	2.21	Phosphomolybdate UV
Potassium	mg/dl	6.85	
	mmol/l	6.20	ISE method - indirect
Protein Total	g/l	45.0	Biuret reaction end point
	g/dl	4.50	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Protein Total	g/l	44.5	Biuret reaction kinetic
	g/dl	4.45	
Sodium	mmol/l	159	ISE method - indirect
TIBC	µmol/l	43.8	FE+UIBC(saturation with iron)
	µg/dl	245	
Triglycerides	mmol/l	2.89	Lipase/GPO-PAP no correction
	mg/dl	256	
	mmol/l	2.88	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	
	mmol/l	2.87	L/G Kinase EP. no correction
	mg/dl	254	
mmol/l	2.89	L/G kinase EP. 0.11 mmol/l correction	
mg/dl	256		
Urea	mmol/l	19.7	Urease kinetic
	mg/dl	118	
	mmol/l	19.7	BUN
Uric Acid (Urate)	mmol/l	0.532	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.94	
	mmol/l	0.528	Uricase peroxidase no ascorbate oxidase
mg/dl	8.87		
mmol/l	0.528	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	8.87		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

RX SERIES® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	30.0	Bromocresol Green
	g/dl	3.00	
Alkaline Phosphatase	U/l	536	Diethanolamine buffer DEA 37°C
	U/l	364	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	155	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	282	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	307	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	150	Tris buffer without P5P 37°C
Bile Acids	µmol/l	44.3	5th Generation Colorimetric
Bilirubin Direct	µmol/l	28.1	Diazo with Sulphanilic Acid
	mg/dl	1.64	
	µmol/l	26.7	Oxidation to Biliverdin/Vanadate
	mg/dl	1.56	
Bilirubin Total	µmol/l	79.1	Diazo with Sulphanilic Acid
	mg/dl	4.63	
	µmol/l	85.0	Oxidation to Biliverdin/Vanadate
	mg/dl	4.97	
Calcium	mmol/l	3.03	Arsenazo III
	mg/dl	12.1	
Cholesterol	mmol/l	8.16	Cholesterol Oxidase - Abell Kendall
	mg/dl	315	
CK Total	U/l	574	CK-NAC substrate start (DGKC) 37°C
	U/l	571	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	326	Alkaline picrate no deproteinization
	mg/dl	3.68	
	µmol/l	384	Enzymatic UV method
	mg/dl	4.34	
gamma-GT	U/l	191	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.4	Glucose oxidase
	mg/dl	278	
Iron	µmol/l	39.5	Colorimetric without ppt.
	µg/dl	221	
Lactate	mmol/l	5.52	Colorimetric Lactate Oxidase
	mg/dl	49.7	
LD (LDH)	U/l	769	P->L German methods 37°C
	U/l	357	L->P IFCC 37°C
Lipase	U/l	81	Randox Colorimetric 37°C

## CALIBRATION SERUM LEVEL 3 (CAL 3)

RX SERIES® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
Phosphate Inorganic	mmol/l	2.13	Phosphomolybdate UV
	mg/dl	6.60	
Potassium	mmol/l	6.25	Enzymatic
Protein Total	g/l	47.1	Biuret reaction end point
	g/dl	4.71	
Sodium	mmol/l	158	Enzymatic
TIBC	µmol/l	44.9	Direct Colorimetric
	µg/dl	251	
Triglycerides	mmol/l	2.88	Lipase/GPO-PAP no correction
	mg/dl	255	
Urea	mmol/l	18.6	Urease kinetic
	mg/dl	112	
	mmol/l	18.6	BUN
Uric Acid (Urate)	mg/dl	52.2	
	mmol/l	0.587	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.86	
Uric Acid (Urate)	mmol/l	0.556	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.2	Bromocresol Green
	g/dl	2.92	
Alkaline Phosphatase	U/l	321	Diethanolamine buffer DEA 37°C
	U/l	323	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	158	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	260	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	281	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	151	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.0	Enzymatic
Bilirubin Direct	µmol/l	30.9	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	
Bilirubin Total	µmol/l	88.2	Diazo with Sulphanilic Acid
	mg/dl	5.16	
	µmol/l	90.3	Oxidation to Biliverdin/Vanadate
	mg/dl	5.28	
Calcium	mmol/l	3.03	Arsenazo III
	mg/dl	12.1	
Cholesterol	mmol/l	7.72	Cholesterol Oxidase - Abell Kendall
	mg/dl	298	
	mmol/l	7.59	Cholesterol Oxidase - IDMS
	mg/dl	293	
Cholinesterase	U/l	5617	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	533	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	356	Alkaline picrate no deproteinization
	mg/dl	4.02	
	µmol/l	383	Enzymatic UV method
	mg/dl	4.32	
	µmol/l	376	Creatinine PAP method
	mg/dl	4.25	
	µmol/l	370	Jaffe rate blanked
	mg/dl	4.18	
	µmol/l	394	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.45	
gamma-GT	µmol/l	388	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.38	
	µmol/l	374	IDMS traceable
	mg/dl	4.23	
	U/l	169	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	165	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C



## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.3	Glucose oxidase
	mg/dl	276	
Iron	µmol/l	40.2	Colorimetric without ppt.
	µg/dl	225	
Lactate	mmol/l	5.37	Colorimetric Lactate Oxidase
	mg/dl	48.4	
LD (LDH)	U/l	362	L->P 37°C
	U/l	740	P->L German methods 37°C
	U/l	372	L->P IFCC 37°C
Lipase	U/l	74	Other Colorimetric 37°C
Lithium	mmol/l	2.05	Spectrophotometric
	mg/dl	1.42	
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
Phosphate Inorganic	mmol/l	2.29	Phosphomolybdate UV
	mg/dl	7.10	
Potassium	mmol/l	6.18	ISE method - indirect
Protein Total	g/l	44.8	Biuret reaction end point
	g/dl	4.48	
	g/l	44.7	Biuret reaction kinetic
	g/dl	4.47	
Sodium	mmol/l	158	ISE method - indirect
TIBC	µmol/l	42.4	FE+UIBC(saturation with iron)
	µg/dl	237	
Triglycerides	mmol/l	2.95	Lipase/GPO-PAP no correction
	mg/dl	261	
	mmol/l	2.90	L/G Kinase EP. no correction
	mg/dl	257	
Urea	mmol/l	20.7	Urease end point
	mg/dl	124	
	mmol/l	20.2	Urease kinetic
	mg/dl	121	
	mmol/l	20.2	BUN
mg/dl	56.7		
Uric Acid (Urate)	mmol/l	0.556	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	
	mmol/l	0.555	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	
	mmol/l	0.559	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.39	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Siemens Atellica Solution Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	29.4	Bromocresol Green
	g/dl	2.94	
	g/l	27.8	Bromocresol Purple
	g/dl	2.78	
Alkaline Phosphatase	U/l	314	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	162	Tris buffer without P5P 37°C
	U/l	163	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	261	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	304	Siemens - blocked pNPG7 37°C
	U/l	306	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	152	Tris buffer without P5P 37°C
	U/l	153	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.6	Enzymatic
Bilirubin Direct	µmol/l	30.7	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	
Bilirubin Total	µmol/l	90.7	Oxidation to Biliverdin/Vanadate
	mg/dl	5.31	
Calcium	mmol/l	3.14	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.08	Arsenazo III
	mg/dl	12.3	
Chloride	mmol/l	114	ISE indirect
Cholesterol	mmol/l	7.71	Cholesterol Oxidase - Abell Kendall
	mg/dl	298	
	mmol/l	7.70	Cholesterol Oxidase - IDMS
mg/dl	297		
Cholinesterase	U/l	6143	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	515	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	365	Alkaline picrate no deproteinization
	mg/dl	4.12	
	µmol/l	377	Enzymatic UV method
	mg/dl	4.26	
	µmol/l	384	Creatinine PAP method
	mg/dl	4.33	
	µmol/l	368	Jaffe rate blanked
	mg/dl	4.16	
	µmol/l	386	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.36	
µmol/l	378	IDMS traceable	
mg/dl	4.28		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Siemens Atellica Solution Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
gamma-GT	U/l	160	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	159	Gamma glutamyl-4-nitroanilide 37°C
	U/l	162	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.1	Glucose oxidase
	mg/dl	272	
Iron	µmol/l	39.9	Colorimetric with ppt.
	µg/dl	223	
	µmol/l	40.1	Colorimetric without ppt.
	µg/dl	224	
Lactate	mmol/l	5.49	Colorimetric Lactate Oxidase
	mg/dl	49.5	
LD (LDH)	U/l	361	L->P 37°C
	U/l	365	L->P IFCC 37°C
Lipase	U/l	71	Other Colorimetric 37°C
Lithium	mmol/l	2.07	Spectrophotometric
	mg/dl	1.44	
Magnesium	mmol/l	1.79	Xylidyl Blue
	mg/dl	4.35	
	mmol/l	1.77	Methylthymol blue
	mg/dl	4.30	
Phosphate Inorganic	mmol/l	2.32	Phosphomolybdate UV
	mg/dl	7.19	
Potassium	mmol/l	6.04	ISE method - indirect
Protein Total	g/l	45.3	Biuret reaction end point
	g/dl	4.53	
	g/l	45.5	Biuret reaction kinetic
	g/dl	4.55	
Sodium	mmol/l	156	ISE method - indirect
TIBC	µmol/l	45.8	FE+UIBC(saturation with iron)
	µg/dl	256	
	µmol/l	46.7	Direct Colorimetric
	µg/dl	261	
Triglycerides	mmol/l	3.02	Lipase/GPO-PAP no correction
	mg/dl	267	
	mmol/l	3.07	L/G Kinase EP. no correction
	mg/dl	272	
Urea	mmol/l	20.2	Urease end point
	mg/dl	121	
	mmol/l	20.2	Urease kinetic
	mg/dl	121	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

Siemens Atellica Solution Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	20.2	BUN
	mg/dl	56.7	
Uric Acid (Urate)	mmol/l	0.562	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	
	mmol/l	0.559	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.39	
mmol/l	0.555	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	9.32		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION EXL® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	27.4	Bromocresol Green
	g/dl	2.74	
	g/l	27.5	Bromocresol Purple
	g/dl	2.75	
Alkaline Phosphatase	U/l	323	Siemens Dimension AMP buffer 37°C
	U/l	324	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	Tris buffer with P5P 37°C
	U/l	152	Tris buffer without P5P 37°C
	U/l	155	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	317	Siemens - blocked pNPG7 37°C
	U/l	322	Siemens - maltopenta/hexaoside 37°C
	U/l	323	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	153	Tris buffer with P5P 37°C
	U/l	155	Tris buffer without P5P 37°C
	U/l	155	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.4	Enzymatic
Bilirubin Direct	µmol/l	18.0	Diazo with Sulphanilic Acid
	mg/dl	1.05	
	µmol/l	17.3	Diazo/Sulphanilic Siemens Dimension
mg/dl	1.01		
Bilirubin Total	µmol/l	81.4	Diazo with Sulphanilic Acid
	mg/dl	4.76	
	µmol/l	79.9	Oxidation to Biliverdin/Vanadate
mg/dl	4.67		
Calcium	mmol/l	3.04	Cresolphthalein complexone
	mg/dl	12.2	
	mmol/l	3.09	Arsenazo III
mg/dl	12.4		
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.33	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	
	mmol/l	7.36	Dimension-Siemens reagents
mg/dl	284		
Cholinesterase	U/l	8988	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	506	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	389	Alkaline picrate with deproteinization
	mg/dl	4.40	
	µmol/l	382	Alkaline picrate no deproteinization
mg/dl	4.32		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION EXL® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Creatinine	µmol/l	377	Enzymatic UV method
	mg/dl	4.26	
	µmol/l	380	Creatinine PAP method
	mg/dl	4.29	
	µmol/l	384	Jaffe rate blanked
	mg/dl	4.34	
	µmol/l	379	IDMS traceable
	mg/dl	4.28	
gamma-GT	U/l	187	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	212	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.3	Oxygen electrode
	mg/dl	276	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	38.6	Colorimetric with ppt.
	µg/dl	216	
	µmol/l	38.5	Colorimetric without ppt.
	µg/dl	215	
Lactate	mmol/l	5.34	UV LDH
	mg/dl	48.1	
LD (LDH)	U/l	364	L->P 37°C
	U/l	359	Siemens Dimension L-P Non IFCC 37°C
	U/l	359	L->P IFCC 37°C
Lipase	U/l	235	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.84	Xylidyl Blue
	mg/dl	4.47	
	mmol/l	1.85	Methylthymol blue
	mg/dl	4.50	
Phosphate Inorganic	mmol/l	2.29	Phosphomolybdate enzymatic
	mg/dl	7.10	
	mmol/l	2.32	Phosphomolybdate UV
	mg/dl	7.19	
Potassium	mmol/l	6.16	ISE method - indirect
Protein Total	g/l	46.8	Biuret reaction end point
	g/dl	4.68	
Sodium	mmol/l	158	ISE method - indirect
TIBC	µmol/l	39.2	Removal of excess free iron
	µg/dl	219	
	µmol/l	40.2	FE+UIBC(saturation with iron)
	µg/dl	225	
	µmol/l	39.2	Direct Colorimetric
	µg/dl	219	

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION EXL® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.87	Lipase/GPO-PAP no correction
	mg/dl	254	
	mmol/l	2.88	L/G Kinase EP. no correction
	mg/dl	255	
	mmol/l	2.88	Lipase/Glycerol Dehydrogenase
	mg/dl	255	
mg/dl	253		
Urea	mmol/l	20.4	Urease end point
	mg/dl	123	
	mmol/l	20.5	Urease kinetic
	mg/dl	123	
	mmol/l	20.5	BUN
	mg/dl	57.5	
Uric Acid (Urate)	mmol/l	0.547	Uricase catalase 340nm
	mg/dl	9.19	
	mmol/l	0.557	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.36	
	mmol/l	0.540	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.07	
mmol/l	0.547	Spectrophotometric at 280-290	
mg/dl	9.19		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Albumin	g/l	28.1	Bromocresol Green
	g/dl	2.81	
	g/l	27.5	Bromocresol Purple
	g/dl	2.75	
Alkaline Phosphatase	U/l	321	Siemens Dimension AMP buffer 37°C
	U/l	323	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	153	Tris buffer with P5P 37°C
	U/l	154	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	321	Siemens - maltopenta/hexaoside 37°C
	U/l	324	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	156	Tris buffer with P5P 37°C
	U/l	139	Tris buffer without P5P 37°C
	U/l	156	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.1	Enzymatic
Bilirubin Direct	µmol/l	17.4	Diazo with Sulphanilic Acid
	mg/dl	1.02	
	µmol/l	17.3	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.01	
Bilirubin Total	µmol/l	80.6	Diazo with Sulphanilic Acid
	mg/dl	4.71	
Calcium	mmol/l	3.04	Cresolphthalein complexone
	mg/dl	12.2	
	mmol/l	2.86	Arsenazo III
	mg/dl	11.5	
Chloride	mmol/l	113	ISE indirect
	mmol/l	7.43	
	mg/dl	287	
	mg/dl	283	
Cholesterol	mmol/l	7.32	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	
	mmol/l	7.32	Dimension-Siemens reagents
	mg/dl	283	
Cholinesterase	U/l	8945	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	504	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	384	Alkaline picrate no deproteinization
	mg/dl	4.34	
	µmol/l	383	Enzymatic UV method
	mg/dl	4.33	
	µmol/l	376	Creatinine PAP method
	mg/dl	4.25	
	µmol/l	390	Jaffe rate blanked
	mg/dl	4.40	



## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Creatinine	µmol/l	375	IDMS traceable
	mg/dl	4.24	
gamma-GT	U/l	188	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	205	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.3	Glucose dehydrogenase
	mg/dl	276	
	mmol/l	15.6	Hexokinase
	mg/dl	281	
Iron	µmol/l	38.5	Colorimetric with ppt.
	µg/dl	215	
	µmol/l	38.5	Colorimetric without ppt.
	µg/dl	215	
Lactate	mmol/l	5.32	UV LDH
	mg/dl	47.9	
LD (LDH)	U/l	365	Siemens Dimension L-P Non IFCC 37°C
	U/l	360	L->P IFCC 37°C
Lipase	U/l	250	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.34	Spectrophotometric
	mg/dl	1.62	
Magnesium	mmol/l	1.86	Methylthymol blue
	mg/dl	4.52	
Phosphate Inorganic	mmol/l	2.30	Phosphomolybdate enzymatic
	mg/dl	7.13	
	mmol/l	2.29	Phosphomolybdate UV
mg/dl	7.10		
Potassium	mmol/l	6.11	ISE method - indirect
Protein Total	g/l	46.8	Biuret reaction end point
	g/dl	4.68	
Sodium	mmol/l	157	ISE method - indirect
TIBC	µmol/l	39.6	Removal of excess free iron
	µg/dl	221	
	µmol/l	39.3	FE+UIBC(saturation with iron)
	µg/dl	220	
	µmol/l	39.1	Direct Colorimetric
µg/dl	219		
Triglycerides	mmol/l	2.84	Lipase/GPO-PAP no correction
	mg/dl	251	
	mmol/l	2.86	L/G Kinase EP. no correction
	mg/dl	253	
	mmol/l	2.87	Lipase/Glycerol Dehydrogenase
mg/dl	254		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Urea	mmol/l	21.0	Urease end point
	mg/dl	126	
	mmol/l	20.4	Urease kinetic
	mg/dl	123	
mmol/l	20.4	BUN	
mg/dl	57.3		
Uric Acid (Urate)	mmol/l	0.549	Uricase catalase 340nm
	mg/dl	9.22	
	mmol/l	0.547	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.19	
	mmol/l	0.534	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.97	
mmol/l	0.545	Spectrophotometric at 280-290	
mg/dl	9.16		
mmol/l	0.531	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	8.92		

## CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION Vista® Lot. No. 1260UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2024-11-28

Analyte	unit	Target	methods
Alkaline Phosphatase	U/l	319	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	153	Tris buffer with P5P 37°C
Amylase Total	U/l	318	Siemens 2-chloro-pNPG3 37°C
Bilirubin Total	µmol/l	78.0	Diazo with Sulphanilic Acid
	mg/dl	4.56	
Calcium	mmol/l	3.03	Cresolphthalein complexone
	mg/dl	12.1	
Cholesterol	mmol/l	7.01	Cholesterol Oxidase - Abell Kendall
	mg/dl	271	
CK Total	U/l	497	CK-NAC (IFCC) 37°C
Iron	µmol/l	38.1	Colorimetric without ppt.
	µg/dl	213	
LD (LDH)	U/l	357	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.17	Phosphomolybdate UV
	mg/dl	6.73	
Potassium	mmol/l	5.99	ISE method - indirect
Protein Total	g/l	46.9	Biuret reaction end point
	g/dl	4.69	
Sodium	mmol/l	154	ISE method - indirect
Triglycerides	mmol/l	3.02	Lipase/GPO-PAP no correction
	mg/dl	267	
Uric Acid (Urate)	mmol/l	0.527	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.85	