PRODUCT INFORMATION

Calibration Serum Level 3

CAL2351

Lot 1225UE

As a result of our continuous post-market surveillance activities, Randox have realigned the **RX Series** calibration target for the below analytes to their corresponding reference materials. A comparable negative shift in recovery will be observed with patient, quality control and proficiency material up to the stated values in Table 1 below.

Table 1.

Analyte	Reference Material	% Adjustment
Calcium	NIST SRM 909 Reference Material NIST SRM 956 Reference Material	-5.5
Glucose	NIST SRM 917 Reference Material NIST SRM 965 Reference Material	-5.0
Magnesium	NIST SRM 909 Reference Material	-4.0
Inorganic Phosphate	Internal Master	-6.0
Urea	NIST SRM 909 Reference Material NIST SRM 912 Reference Material	-3.0

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CALIBRATION SERUM LEVEL 3 (CAL 3)

CAT. NO.	CAL 2351	**LOT NO.**	1225UE
SIZE:	20 x 5ml	**EXPIRY:**	2023-10-28
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 2351 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 for1 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.

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.

The presence of a vertical bar in the margin indicates a technical update from the previous revision.

EC REP Randox Teoranta, Meenmore,
Dungloe, Donegal,
F94 TV06, Ireland

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CALIBRATION SERUM LEVEL 3 (CAL3)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	29.9	Bromocresol Green
	g/dl	2.99	
	g/l	28.9	Bromocresol Purple
	g/dl	2.89	
Alkaline Phosphatase	U/l	343	Diethanolamine buffer DEA 37°C
	U/l	349	AMP optimised to IFCC 37°C
	U/l	350	AMP non-optimised 37°C
	U/l	341	Colorimetric 37°C
ALT (GPT)	U/l	151	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	257	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	334	Abbott Architect IFCC Cal. 37°C
	U/l	319	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	140	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.6	Enzymatic
Bile Acids	µmol/l	47.9	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	37.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.19	
	µmol/l	38.6	Diazo with Sulphanilic Acid
	mg/dl	2.26	
	µmol/l	38.9	Diazo with Dichloroaniline (DCA)
	mg/dl	2.28	
Bilirubin Total	µmol/l	96.1	Diazo with Dichloroaniline (DCA)
	mg/dl	5.62	
	µmol/l	97.1	Diazo with Sulphanilic Acid
	mg/dl	5.68	
	µmol/l	91.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.37	
	µmol/l	95.3	Diazonium ion
	mg/dl	5.58	
Calcium	mmol/l	3.02	Arsenazo III
	mg/dl	12.1	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.23	Cholesterol Oxidase - Abell Kendall
	mg/dl	279	
	mmol/l	7.21	Cholesterol Oxidase - IDMS
	mg/dl	278	
	mmol/l	7.16	Cholesterol Dehydrogenase
	mg/dl	276	
Cholinesterase	U/l	6075	Colorimetric Butyrylthiocholine 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
CK Total	U/l	565	CK-NAC serum start (DGKC) 37°C
	U/l	584	CK-NAC substrate start (DGKC) 37°C
	U/l	578	CK-NAC (IFCC) 37°C
	U/l	571	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	20.3	Colorimetric
	µg/dl	129	
Creatinine	µmol/l	387	Alkaline picrate with deproteinization
	mg/dl	4.37	
	µmol/l	388	Alkaline picrate no deproteinization
	mg/dl	4.39	
	µmol/l	381	Enzymatic UV method
	mg/dl	4.31	
	µmol/l	389	Jaffe rate blanked
	mg/dl	4.39	
	µmol/l	390	IDMS traceable
	mg/dl	4.41	
gamma-GT	U/l	185	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	173	Gamma glutamyl-4-nitroanilide 37°C
	U/l	186	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	185	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.8	Glucose oxidase
	mg/dl	285	
Iron	µmol/l	39.3	Colorimetric with ppt.
	µg/dl	220	
	µmol/l	38.7	Colorimetric without ppt.
	µg/dl	216	
Lactate	mmol/l	5.38	Colorimetric Lactate Oxidase
	mg/dl	48.5	
LD (LDH)	U/l	346	L->P 37°C
	U/l	345	L->P IFCC 37°C
Lipase	U/l	58	Other Colorimetric 37°C
Lithium	mmol/l	1.91	Spectrophotometric
	mg/dl	1.33	
Magnesium	mmol/l	1.74	Arsenazo III
	mg/dl	4.23	
	mmol/l	1.74	Enzymatic
	mg/dl	4.23	
Phosphate Inorganic	mmol/l	2.21	Phosphomolybdate enzymatic
	mg/dl	6.85	
	mmol/l	2.22	Phosphomolybdate UV
	mg/dl	6.88	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Abbott Alinity/ Architect c/ci Systems® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Potassium	mmol/l	6.08	ISE method - indirect
Protein Total	g/l	46.6	Biuret reaction end point
	g/dl	4.66	
	g/l	47.0	Biuret reaction kinetic
	g/dl	4.70	
Sodium	mmol/l	160	ISE method - indirect
TIBC	µmol/l	42.4	FE+UIBC(saturation with iron)
	µg/dl	237	
	µmol/l	40.4	Calculated from Transferrin
	µg/dl	226	
Triglycerides	mmol/l	2.87	Lipase/GPO-PAP no correction
	mg/dl	254	
	mmol/l	2.82	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	
	mmol/l	2.84	L/G Kinase EP. no correction
	mg/dl	251	
	mmol/l	2.85	Lipase/Glycerol Dehydrogenase
	mg/dl	252	
UIBC	µmol/l	4.38	Direct Colorimetric
	µg/dl	24.5	
Urea	mmol/l	22.3	Urease end point
	mg/dl	134	
	mmol/l	22.2	Urease kinetic
	mg/dl	133	
	mmol/l	22.2	BUN
	mg/dl	62.3	
Uric Acid (Urate)	mmol/l	0.573	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.63	
	mmol/l	0.568	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.54	
	mmol/l	0.564	Spectrophotometric at 280-290
	mg/dl	9.48	
	mmol/l	0.574	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.64	

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CALIBRATION SERUM LEVEL 3 (CAL3)

ABX Pentra 400® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	29.8	Bromocresol Green
	g/dl	2.98	
Alkaline Phosphatase	U/l	370	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	161	Tris buffer without P5P 37°C
AST (GOT)	U/l	163	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	37.6	Diazo with Sulphanilic Acid
	mg/dl	2.20	
	µmol/l	38.3	Diazo with Dichloroaniline (DCA)
	mg/dl	2.24	
Bilirubin Total	µmol/l	106	Diazo with Dichloroaniline (DCA)
	mg/dl	6.21	
	µmol/l	106	Diazo with Sulphanilic Acid
	mg/dl	6.19	
Calcium	mmol/l	3.27	Arsenazo III
	mg/dl	13.1	
Chloride	mmol/l	116	ISE direct
Cholesterol	mmol/l	7.43	Cholesterol Oxidase - Abell Kendall
	mg/dl	287	
CK Total	U/l	547	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	357	Alkaline picrate no deproteinization
	mg/dl	4.03	
	µmol/l	354	Jaffe rate blanked
	mg/dl	4.00	
gamma-GT	U/l	186	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	185	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.5	Hexokinase
	mg/dl	280	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	37.8	Colorimetric without ppt.
	µg/dl	211	
LD (LDH)	U/l	391	L->P IFCC 37°C
Lipase	U/l	50	Other Colorimetric 37°C
Magnesium	mmol/l	1.71	Xylidyl Blue
	mg/dl	4.16	
Phosphate Inorganic	mmol/l	2.52	Phosphomolybdate UV
	mg/dl	7.81	
Potassium	mmol/l	6.00	ISE method - direct
Protein Total	g/l	49.7	Biuret reaction end point
	g/dl	4.97	

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CALIBRATION SERUM LEVEL 3 (CAL3)

ABX Pentra 400® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Sodium	mmol/l	157	ISE method - direct
Triglycerides	mmol/l	2.83	Lipase/GPO-PAP no correction
	mg/dl	250	
Urea	mmol/l	20.2	Urease kinetic
	mg/dl	121	
	mmol/l	20.2	BUN
	mg/dl	56.7	
Uric Acid (Urate)	mmol/l	0.539	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.06	
	mmol/l	0.552	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.27	
	mmol/l	0.547	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.19	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman Coulter AU Series® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	28.9	Bromocresol Green
	g/dl	2.89	
	g/l	28.7	Bromocresol Purple
	g/dl	2.87	
Alkaline Phosphatase	U/l	402	AMP optimised to IFCC 37°C
	U/l	397	AMP non-optimised 37°C
ALT (GPT)	U/l	157	Colorimetric 37°C
	U/l	157	Tris buffer without P5P 37°C
	U/l	155	Tris buffer SCE 37°C
	U/l	156	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	158	Beckman (Extinction Coefficient) 37°C
Amylase Pancreatic	U/l	250	Immunoinhibition EPS substrate 37°C
	U/l	261	Roche EPS Liquid 37°C
	U/l	262	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	290	pNP Maltotrioside substrates 37°C
	U/l	298	Randox Liquid Ethylidene pNPG7 37°C
	U/l	290	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	300	Beckman Coulter - blocked pNPG7 37°C
	U/l	303	Beckman Synchron AMY7 37°C
	U/l	289	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	153	Colorimetric 37°C
	U/l	152	Tris buffer without P5P 37°C
	U/l	154	Tris buffer SCE 37°C
	U/l	155	Beckman Mod. IFCC Ref. without P5P 37°C
	U/l	153	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.6	Enzymatic
Bilirubin Direct	µmol/l	33.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.93	
	µmol/l	32.6	Diazo with Sulphanilic Acid
	mg/dl	1.91	
	µmol/l	32.5	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.90	
Bilirubin Total	µmol/l	98.5	Diazo with Dichloroaniline (DCA)
	mg/dl	5.76	
	µmol/l	96.1	Diazo with Sulphanilic Acid
	mg/dl	5.62	
	µmol/l	98.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.75	
	µmol/l	103	Oxidation to Biliverdin/Vanadate
	mg/dl	6.01	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman Coulter AU Series® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	97.5	DPD (Beckman AU)
	mg/dl	5.70	
Calcium	mmol/l	3.15	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.13	Ion selective electrode
	mg/dl	12.5	
	mmol/l	3.13	Arsenazo III
	mg/dl	12.5	
Chloride	mmol/l	112	Colorimetric
	mmol/l	114	ISE indirect
Cholesterol	mmol/l	7.49	Cholesterol Oxidase - Abell Kendall
	mg/dl	289	
	mmol/l	7.71	Cholesterol Oxidase - IDMS
	mg/dl	298	
	mmol/l	7.55	Cholesterol Dehydrogenase
	mg/dl	291	
Cholinesterase	U/l	4985	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	579	CK-NAC (IFCC) 37°C
	U/l	613	Monothioglycerol 37°C
	U/l	588	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	345	Alkaline picrate with deproteinization
	mg/dl	3.90	
	µmol/l	349	Alkaline picrate no deproteinization
	mg/dl	3.94	
	µmol/l	373	Enzymatic UV method
	mg/dl	4.22	
	µmol/l	371	Creatinine PAP method
	mg/dl	4.19	
	µmol/l	351	Jaffe rate blanked
	mg/dl	3.96	
	µmol/l	388	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.38	
	µmol/l	378	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.27	
	µmol/l	359	IDMS traceable
	mg/dl	4.06	
D-3-Hydroxybutyrate	mmol/l	1.14	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	185	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	193	Gamma glutamyl-4-nitroanilide 37°C
	U/l	191	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	183	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	190	Beckman Szasz (Extinction Coeff) 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman Coulter AU Series® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Glucose	mmol/l	15.9	GOD/02-Beckman method
	mg/dl	287	
	mmol/l	15.6	Glucose dehydrogenase
	mg/dl	281	
	mmol/l	16.1	Hexokinase
	mg/dl	290	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	39.2	Colorimetric with ppt.
	µg/dl	219	
	µmol/l	38.8	Colorimetric without ppt.
	µg/dl	217	
Lactate	mmol/l	5.27	Colorimetric Lactate Oxidase
	mg/dl	47.5	
LD (LDH)	U/l	350	L->P 37°C
	U/l	777	P->L Scandinavian & Dutch 37°C
	U/l	711	P->L German methods 37°C
	U/l	352	L->P IFCC 37°C
	U/l	351	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	63	Other Colorimetric 37°C
	U/l	83	Randox Colorimetric 37°C
Lithium	mmol/l	1.91	Spectrophotometric
	mg/dl	1.33	
Magnesium	mmol/l	1.77	Calmagite
	mg/dl	4.30	
	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
	mmol/l	1.77	Methylthymol blue
	mg/dl	4.30	
	mmol/l	1.80	Enzymatic
	mg/dl	4.37	
Phosphate Inorganic	mmol/l	2.20	Phosphomolybdate enzymatic
	mg/dl	6.82	
	mmol/l	2.23	Phosphomolybdate UV
	mg/dl	6.91	
	mmol/l	2.22	Beckman PHOSm (365nm)
	mg/dl	6.88	
Potassium	mmol/l	6.08	ISE method - indirect
Protein Total	g/l	45.2	Biuret reaction end point
	g/dl	4.52	
	g/l	45.3	Biuret reaction kinetic
	g/dl	4.53	
Sodium	mmol/l	160	ISE method - indirect

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CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman Coulter AU Series® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
TIBC	µmol/l	41.4	FE+UIBC(saturation with iron)
	µg/dl	231	
	µmol/l	40.9	Direct Colorimetric
	µg/dl	229	
Triglycerides	mmol/l	2.82	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.80	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	248	
	mmol/l	2.83	L/G Kinase EP. no correction
	mg/dl	250	
	mmol/l	2.79	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	247	
	mmol/l	2.80	Lipase/Glycerol Dehydrogenase
	mg/dl	248	
Urea	mmol/l	22.0	Beckman-Conductivity
	mg/dl	132	
	mmol/l	21.7	Urease end point
	mg/dl	130	
	mmol/l	21.9	Urease kinetic
	mg/dl	132	
	mmol/l	20.3	Urease hypochlorite
	mg/dl	122	
	mmol/l	21.9	BUN
	mg/dl	61.5	
Uric Acid (Urate)	mmol/l	0.572	Reduction methods
	mg/dl	9.61	
	mmol/l	0.580	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.74	
	mmol/l	0.574	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.64	
	mmol/l	0.579	Spectrophotometric at 280-290
	mg/dl	9.73	
	mmol/l	0.568	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	
Zinc	µmol/l	37.5	Colorimetric with deproteinisation
	µg/dl	245	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman DxC600/800® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.3	Bromocresol Purple
	g/dl	3.03	
Alkaline Phosphatase	U/l	377	AMP optimised to IFCC 37°C
	U/l	349	AMP non-optimised 37°C
ALT (GPT)	U/l	145	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	309	Beckman Coulter - blocked pNPG7 37°C
	U/l	307	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	139	Beckman Mod. IFCC Ref. without P5P 37°C
Bilirubin Direct	µmol/l	24.7	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.44	
Bilirubin Total	µmol/l	97.2	Diazo with Sulphanilic Acid
	mg/dl	5.69	
Calcium	mmol/l	3.03	Ion selective electrode
	mg/dl	12.1	
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.67	Cholesterol Oxidase - Abell Kendall
	mg/dl	296	
Cholinesterase	U/l	5097	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	578	CK-NAC (IFCC) 37°C
	U/l	575	Monothioglycerol 37°C
Creatinine	µmol/l	373	Alkaline picrate no deproteinization
	mg/dl	4.22	
	µmol/l	369	Jaffe rate blanked
	mg/dl	4.17	
	µmol/l	380	IDMS traceable
	mg/dl	4.30	
Glucose	mmol/l	15.7	GOD/02-Beckman method
	mg/dl	284	
	mmol/l	15.3	Hexokinase
	mg/dl	276	
Iron	µmol/l	38.0	Colorimetric without ppt.
	µg/dl	212	
Lactate	mmol/l	5.20	Colorimetric Lactate Oxidase
	mg/dl	46.9	
LD (LDH)	U/l	279	L->P 37°C
	U/l	874	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	389	L->P IFCC 37°C
Lipase	U/l	60	Other Colorimetric 37°C
Magnesium	mmol/l	1.75	Calmagite
	mg/dl	4.25	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Beckman DxC600/800® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.23	Phosphomolybdate UV
	mg/dl	6.91	
Potassium	mmol/l	6.05	ISE method - indirect
Protein Total	g/l	45.7	Biuret reaction end point
	g/dl	4.57	
Sodium	mmol/l	157	ISE method - indirect
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
	mmol/l	2.88	L/G Kinase EP. no correction
	mg/dl	255	
Urea	mmol/l	22.0	Urease kinetic
	mg/dl	132	
	mmol/l	22.0	BUN
	mg/dl	61.7	
Uric Acid (Urate)	mmol/l	0.552	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.27	

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CALIBRATION SERUM LEVEL 3 (CAL3)

BIOSYSTEMS A15 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.2	Bromocresol Green
	g/dl	3.02	
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	151	Tris buffer without P5P 37°C
	U/l	112	Tris buffer without P5P 30°C
	U/l	85	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	100	Diazo with Sulphanilic Acid
	mg/dl	5.85	
	µmol/l	95.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.58	
Calcium	mmol/l	3.14	Arsenazo III
	mg/dl	12.6	
Cholesterol	mmol/l	7.37	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	
Creatinine	µmol/l	350	Alkaline picrate no deproteinization
	mg/dl	3.96	
	µmol/l	352	Jaffe rate blanked
	mg/dl	3.98	
gamma-GT	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	15.6	Glucose oxidase
	mg/dl	281	
Protein Total	g/l	49.5	Biuret reaction end point
	g/dl	4.95	
Triglycerides	mmol/l	2.80	Lipase/GPO-PAP no correction
	mg/dl	248	
	mmol/l	2.87	L/G Kinase EP. no correction
	mg/dl	254	
Urea	mmol/l	20.6	Urease kinetic
	mg/dl	124	
	mmol/l	20.6	BUN
	mg/dl	57.8	
Uric Acid (Urate)	mmol/l	0.558	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	

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CALIBRATION SERUM LEVEL 3 (CAL3)

BIOSYSTEMS A15 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.552	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.27	
	mmol/l	0.558	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	

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CALIBRATION SERUM LEVEL 3 (CAL3)

BIOSYSTEMS A25 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	31.7	Bromocresol Green
	g/dl	3.17	
Alkaline Phosphatase	U/l	514	Diethanolamine buffer DEA 37°C
	U/l	400	Diethanolamine buffer DEA 30°C
	U/l	328	Diethanolamine buffer DEA 25°C
	U/l	379	AMP optimised to IFCC 37°C
	U/l	295	AMP optimised to IFCC 30°C
	U/l	242	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	163	Tris buffer without P5P 37°C
	U/l	121	Tris buffer without P5P 30°C
	U/l	92	Tris buffer without P5P 25°C
AST (GOT)	U/l	161	Tris buffer without P5P 37°C
	U/l	109	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	90.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.26	
Calcium	mmol/l	3.10	Arsenazo III
	mg/dl	12.4	
Cholesterol	mmol/l	7.39	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	
	mmol/l	7.19	Cholesterol Oxidase - IDMS
	mg/dl	278	
Creatinine	µmol/l	319	Alkaline picrate no deproteinization
	mg/dl	3.60	
	µmol/l	326	Jaffe rate blanked
	mg/dl	3.68	
gamma-GT	U/l	186	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	Glucose oxidase
	mg/dl	283	
LD (LDH)	U/l	756	P->L SFBC 37°C
	U/l	546	P->L SFBC 30°C
	U/l	383	P->L SFBC 25°C
Protein Total	g/l	49.0	Biuret reaction end point
	g/dl	4.90	
Triglycerides	mmol/l	2.76	Lipase/GPO-PAP no correction
	mg/dl	244	
	mmol/l	2.83	Lipase/Glycerol Dehydrogenase
	mg/dl	250	

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CALIBRATION SERUM LEVEL 3 (CAL3)

BIOSYSTEMS A25 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Urea	mmol/l	19.1	Urease end point
	mg/dl	115	
	mmol/l	19.9	Urease kinetic
	mg/dl	120	
	mmol/l	19.9	BUN
	mg/dl	55.9	
Uric Acid (Urate)	mmol/l	0.567	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	
	mmol/l	0.570	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.58	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Biotechnica/Wiener BT and CB Series Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.4	Bromocresol Green
	g/dl	3.04	
Alkaline Phosphatase	U/l	519	Diethanolamine buffer DEA 37°C
	U/l	404	Diethanolamine buffer DEA 30°C
	U/l	332	Diethanolamine buffer DEA 25°C
	U/l	350	AMP optimised to IFCC 37°C
	U/l	273	AMP optimised to IFCC 30°C
	U/l	224	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	157	Tris buffer without P5P 37°C
	U/l	116	Tris buffer without P5P 30°C
	U/l	88	Tris buffer without P5P 25°C
AST (GOT)	U/l	154	Tris buffer without P5P 37°C
	U/l	104	Tris buffer without P5P 30°C
	U/l	73	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	35.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.08	
	µmol/l	33.9	Diazo with Sulphanilic Acid
	mg/dl	1.99	
Bilirubin Total	µmol/l	91.8	Diazo with Sulphanilic Acid
	mg/dl	5.37	
	µmol/l	88.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.18	
Calcium	mmol/l	3.16	Cresolphthalein complexone
	mg/dl	12.7	
	mmol/l	3.09	Arsenazo III
	mg/dl	12.4	
Chloride	mmol/l	113	Colorimetric
	mmol/l	114	ISE direct
Cholesterol	mmol/l	7.39	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	
	mmol/l	7.50	Cholesterol Oxidase - IDMS
	mg/dl	290	
Cholinesterase	U/l	5057	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	560	CK-NAC (IFCC) 37°C
	U/l	351	CK-NAC (IFCC) 30°C
	U/l	238	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	338	Alkaline picrate no deproteinization
	mg/dl	3.82	
	µmol/l	370	Creatinine PAP method
	mg/dl	4.18	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Biotechnica/Wiener BT and CB Series Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Creatinine	µmol/l	345	Jaffe rate blanked
	mg/dl	3.90	
	µmol/l	366	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.14	
gamma-GT	U/l	180	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	142	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	111	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
Glucose	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	35.7	Colorimetric without ppt.
	µg/dl	200	
LD (LDH)	U/l	647	P->L Scandinavian & Dutch 37°C
	U/l	467	P->L Scandinavian & Dutch 30°C
	U/l	328	P->L Scandinavian & Dutch 25°C
	U/l	667	P->L German methods 37°C
	U/l	482	P->L German methods 30°C
	U/l	338	P->L German methods 25°C
	U/l	641	P->L SFBC 37°C
	U/l	463	P->L SFBC 30°C
	U/l	325	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	2.31	Phosphomolybdate UV
	mg/dl	7.16	
Potassium	mmol/l	5.96	ISE method - direct
Protein Total	g/l	49.9	Biuret reaction end point
	g/dl	4.99	
Sodium	mmol/l	157	ISE method - direct
Triglycerides	mmol/l	2.81	Lipase/GPO-PAP no correction
	mg/dl	249	
Urea	mmol/l	21.5	Urease kinetic
	mg/dl	129	
	mmol/l	21.5	BUN
	mg/dl	60.3	
Uric Acid (Urate)	mmol/l	0.575	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.66	
	mmol/l	0.560	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.41	
	mmol/l	0.558	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	

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CALIBRATION SERUM LEVEL 3 (CAL3)

COBAS INTEGRA® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	31.8	Bromocresol Green
	g/dl	3.18	
	g/l	31.0	Turbidimetric Assays
	g/dl	3.10	
Alkaline Phosphatase	U/l	331	Roche Integra AMP buffer 37°C
	U/l	258	Roche Integra AMP buffer 30°C
	U/l	212	Roche Integra AMP buffer 25°C
	U/l	337	AMP optimised to IFCC 37°C
	U/l	263	AMP optimised to IFCC 30°C
	U/l	215	AMP optimised to IFCC 25°C
	U/l	344	Colorimetric 37°C
	U/l	268	Colorimetric 30°C
	U/l	220	Colorimetric 25°C
ALT (GPT)	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
Amylase Pancreatic	U/l	273	Immunoinhibition EPS substrate 37°C
	U/l	266	Roche EPS Liquid 37°C
Amylase Total	U/l	287	Roche Integra 2-chloro-pNPG7 37°C
	U/l	285	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	Tris buffer without P5P 37°C
	U/l	97	Tris buffer without P5P 30°C
	U/l	69	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	41.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.43	
	µmol/l	41.4	Diazo with Sulphanilic Acid
	mg/dl	2.42	
	µmol/l	41.2	Roche DPD JG standardised
	mg/dl	2.41	
	µmol/l	41.3	Diazo with Dichloroaniline (DCA)
	mg/dl	2.42	
	µmol/l	40.9	Roche DPD Doumas standardised
	mg/dl	2.39	
Bilirubin Total	µmol/l	89.5	Diazo with Dichloroaniline (DCA)
	mg/dl	5.24	
	µmol/l	88.3	Diazo with Sulphanilic Acid
	mg/dl	5.16	
	µmol/l	87.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.14	

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CALIBRATION SERUM LEVEL 3 (CAL3)

COBAS INTEGRA® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Bilirubin Total	µmol/l	90.2	Diazonium ion
	mg/dl	5.28	
Calcium	mmol/l	3.14	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.09	Arsenazo III
	mg/dl	12.4	
	mmol/l	3.15	NM-BAPTA
	mg/dl	12.6	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.34	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	
	mmol/l	7.39	Cholesterol Oxidase - IDMS
	mg/dl	285	
Cholinesterase	U/l	5217	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	550	CK-NAC serum start (DGKC) 37°C
	U/l	344	CK-NAC serum start (DGKC) 30°C
	U/l	234	CK-NAC serum start (DGKC) 25°C
	U/l	535	CK-NAC substrate start (DGKC) 37°C
	U/l	335	CK-NAC substrate start (DGKC) 30°C
	U/l	227	CK-NAC substrate start (DGKC) 25°C
	U/l	541	CK-NAC (IFCC) 37°C
	U/l	339	CK-NAC (IFCC) 30°C
	U/l	230	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	361	Alkaline picrate with deproteinization
	mg/dl	4.08	
	µmol/l	363	Alkaline picrate no deproteinization
	mg/dl	4.10	
	µmol/l	372	Roche Creatinine Plus
	mg/dl	4.20	
	µmol/l	357	Jaffe rate blanked
	mg/dl	4.03	
	µmol/l	386	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.36	
	µmol/l	380	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.29	
	µmol/l	360	IDMS traceable
	mg/dl	4.07	
gamma-GT	U/l	185	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	146	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	114	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	194	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	153	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	120	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

COBAS INTEGRA® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Glucose	mmol/l	16.0	Hexokinase
	mg/dl	288	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	38.7	Colorimetric with ppt.
	µg/dl	216	
	µmol/l	38.8	Colorimetric without ppt.
	µg/dl	217	
Lactate	mmol/l	5.37	Colorimetric Lactate Oxidase
	mg/dl	48.4	
LD (LDH)	U/l	370	L->P 37°C
	U/l	267	L->P 30°C
	U/l	188	L->P 25°C
	U/l	366	L->P IFCC 37°C
	U/l	264	L->P IFCC 30°C
	U/l	186	L->P IFCC 25°C
Lipase	U/l	61	Roche Colorimetric 37°C
	U/l	61	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.91	Ion selective electrode
	mg/dl	1.33	
Magnesium	mmol/l	1.75	Xylidyl Blue
	mg/dl	4.25	
	mmol/l	1.76	Chlorphosphonazo III
	mg/dl	4.28	
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	6.13	ISE method - indirect
Protein Total	g/l	43.7	Biuret reaction end point
	g/dl	4.37	
	g/l	43.6	Biuret reaction kinetic
	g/dl	4.36	
Sodium	mmol/l	159	ISE method - indirect
TIBC	µmol/l	38.1	FE+UIBC(saturation with iron)
	µg/dl	213	
Triglycerides	mmol/l	2.86	Lipase/GPO-PAP no correction
	mg/dl	253	
	mmol/l	2.77	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	245	
	mmol/l	2.84	L/G Kinase EP. no correction
	mg/dl	251	
	mmol/l	2.80	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	248	

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CALIBRATION SERUM LEVEL 3 (CAL3)

COBAS INTEGRA® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.85	Lipase/Glycerol Dehydrogenase
	mg/dl	252	
Urea	mmol/l	20.7	Urease end point
	mg/dl	124	
	mmol/l	21.0	Urease kinetic
	mg/dl	126	
	mmol/l	21.0	BUN
	mg/dl	58.9	
Uric Acid (Urate)	mmol/l	0.573	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.63	
	mmol/l	0.574	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.64	
	mmol/l	0.569	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

Elitech/Vitalab Selectra Series Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	32.1	Bromocresol Green
	g/dl	3.21	
Alkaline Phosphatase	U/l	504	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	154	Tris buffer without P5P 37°C
AST (GOT)	U/l	147	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	84.5	Diazo with Sulphanilic Acid
	mg/dl	4.94	
Calcium	mmol/l	3.05	Arsenazo III
	mg/dl	12.2	
Cholesterol	mmol/l	7.56	Cholesterol Oxidase - Abell Kendall
	mg/dl	292	
	mmol/l	7.55	Cholesterol Oxidase - IDMS
	mg/dl	291	
CK Total	U/l	629	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	350	Alkaline picrate no deproteinization
	mg/dl	3.96	
	µmol/l	374	Creatinine PAP method
	mg/dl	4.22	
gamma-GT	U/l	189	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	194	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.3	Hexokinase
	mg/dl	293	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	36.4	Colorimetric with ppt.
	µg/dl	204	
	µmol/l	36.3	Colorimetric without ppt.
	µg/dl	203	
LD (LDH)	U/l	368	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.33	Phosphomolybdate UV
	mg/dl	7.22	
Protein Total	g/l	50.3	Biuret reaction end point
	g/dl	5.03	
Triglycerides	mmol/l	2.82	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.89	L/G Kinase EP. no correction
	mg/dl	256	
Urea	mmol/l	20.6	Urease kinetic
	mg/dl	124	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Elitech/Vitalab Selectra Series Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Urea	mmol/l	20.6	BUN
	mg/dl	57.8	
Uric Acid (Urate)	mmol/l	0.628	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.6	

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CALIBRATION SERUM LEVEL 3 (CAL3)

HITACHI SERIES® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	method
Albumin	g/l	30.1	Bromocresol Green
	g/dl	3.01	
Alkaline Phosphatase	U/l	330	Diethanolamine buffer DEA 37°C
	U/l	257	Diethanolamine buffer DEA 30°C
	U/l	211	Diethanolamine buffer DEA 25°C
	U/l	340	AMP optimised to IFCC 37°C
	U/l	265	AMP optimised to IFCC 30°C
	U/l	217	AMP optimised to IFCC 25°C
	U/l	382	Randox AMP 37°C
	U/l	298	Randox AMP 30°C
	U/l	244	Randox AMP 25°C
ALT (GPT)	U/l	155	Tris buffer without P5P 37°C
	U/l	115	Tris buffer without P5P 30°C
	U/l	87	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	297	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	285	Roche liquid stable pNPG7 37°C
	U/l	315	Randox Liquid Ethylidene pNPG7 37°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
Bile Acids	µmol/l	45.6	5th Generation Colorimetric
Bilirubin Total	µmol/l	94.6	Diazo with Dichloroaniline (DCA)
	mg/dl	5.53	
	µmol/l	108	Diazo with Sulphanilic Acid
	mg/dl	6.31	
	µmol/l	90.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.28	
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.38	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	
Cholinesterase	U/l	4391	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	575	CK-NAC (IFCC) 37°C
	U/l	360	CK-NAC (IFCC) 30°C
	U/l	244	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	335	Alkaline picrate with deproteinization
	mg/dl	3.79	
	µmol/l	339	Alkaline picrate no deproteinization
	mg/dl	3.83	
	µmol/l	336	Jaffe rate blanked
	mg/dl	3.79	

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CALIBRATION SERUM LEVEL 3 (CAL3)

HITACHI SERIES® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Creatinine	µmol/l	360	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.07	
gamma-GT	U/l	176	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	175	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	108	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	209	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	165	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	129	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.7	Glucose oxidase
	mg/dl	283	
Iron	µmol/l	37.3	Colorimetric without ppt.
	µg/dl	209	
LD (LDH)	U/l	363	L->P IFCC 37°C
	U/l	262	L->P IFCC 30°C
	U/l	184	L->P IFCC 25°C
Magnesium	mmol/l	1.70	Xylidyl Blue
	mg/dl	4.13	
Potassium	mmol/l	6.17	ISE method - indirect
Protein Total	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
Sodium	mmol/l	161	ISE method - indirect
Triglycerides	mmol/l	2.75	Lipase/GPO-PAP no correction
	mg/dl	243	
	mmol/l	2.84	L/G Kinase EP. no correction
	mg/dl	251	
	mmol/l	2.81	Lipase/Glycerol Dehydrogenase
	mg/dl	249	
Urea	mmol/l	21.9	Urease end point
	mg/dl	132	
	mmol/l	21.2	Urease kinetic
	mg/dl	127	
	mmol/l	21.2	BUN
	mg/dl	59.5	
Uric Acid (Urate)	mmol/l	0.568	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.54	
	mmol/l	0.548	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	

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CALIBRATION SERUM LEVEL 3 (CAL3)

HITACHI SERIES® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.570	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	

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CALIBRATION SERUM LEVEL 3 (CAL3)

ILab 600®/650®/Aries/Taurus Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.8	Bromocresol Green
	g/dl	3.08	
Alkaline Phosphatase	U/l	399	Diethanolamine buffer DEA 37°C
	U/l	311	Diethanolamine buffer DEA 30°C
	U/l	255	Diethanolamine buffer DEA 25°C
	U/l	375	AMP optimised to IFCC 37°C
	U/l	292	AMP optimised to IFCC 30°C
	U/l	240	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	144	Tris buffer without P5P 37°C
	U/l	107	Tris buffer without P5P 30°C
	U/l	81	Tris buffer without P5P 25°C
Amylase Total	U/l	303	I.L. 2-chloro-pNPG3 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	29.0	Diazo with Sulphanilic Acid
	mg/dl	1.69	
Bilirubin Total	µmol/l	96.0	Diazo with Sulphanilic Acid
	mg/dl	5.61	
	µmol/l	95.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.56	
Calcium	mmol/l	3.15	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.13	Arsenazo III
	mg/dl	12.5	
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.32	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	
Cholinesterase	U/l	5280	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	566	CK-NAC (IFCC) 37°C
	U/l	354	CK-NAC (IFCC) 30°C
	U/l	241	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	359	Alkaline picrate no deproteinization
	mg/dl	4.06	
	µmol/l	394	Creatinine PAP method
	mg/dl	4.45	
	µmol/l	406	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.59	
gamma-GT	U/l	178	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	140	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

ILab 600®/650®/Aries/Taurus Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
gamma-GT	U/l	184	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	145	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	38.6	Colorimetric without ppt.
	µg/dl	216	
LD (LDH)	U/l	672	P->L German methods 37°C
	U/l	485	P->L German methods 30°C
	U/l	341	P->L German methods 25°C
	U/l	743	P->L SFBC 37°C
	U/l	536	P->L SFBC 30°C
	U/l	377	P->L SFBC 25°C
Lipase	U/l	67	Other Colorimetric 37°C
Magnesium	mmol/l	1.86	Xylidyl Blue
	mg/dl	4.52	
	mmol/l	1.79	Enzymatic
	mg/dl	4.35	
Phosphate Inorganic	mmol/l	2.18	Phosphomolybdate UV
	mg/dl	6.76	
Potassium	mmol/l	6.12	ISE method - indirect
Protein Total	g/l	46.5	Biuret reaction end point
	g/dl	4.65	
Sodium	mmol/l	161	ISE method - indirect
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
	mmol/l	2.88	L/G Kinase EP. no correction
	mg/dl	255	
Urea	mmol/l	22.0	Urease kinetic
	mg/dl	132	
	mmol/l	22.0	BUN
	mg/dl	61.7	
Uric Acid (Urate)	mmol/l	0.518	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.70	
	mmol/l	0.547	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.19	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	29.9	Bromocresol Green
	g/dl	2.99	
Alkaline Phosphatase	U/l	343	AMP optimised to IFCC 37°C
	U/l	267	AMP optimised to IFCC 30°C
	U/l	219	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	173	Colorimetric 37°C
	U/l	128	Colorimetric 30°C
	U/l	97	Colorimetric 25°C
	U/l	158	Tris buffer without P5P 37°C
	U/l	117	Tris buffer without P5P 30°C
	U/l	89	Tris buffer without P5P 25°C
AST (GOT)	U/l	159	Tris buffer without P5P 37°C
	U/l	107	Tris buffer without P5P 30°C
	U/l	76	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	93.0	Diazo with Sulphanilic Acid
	mg/dl	5.44	
	µmol/l	88.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.16	
	µmol/l	93.0	Nitrobenzenediazonium salt
	mg/dl	5.44	
Calcium	mmol/l	3.24	Arsenazo III
	mg/dl	13.0	
Chloride	mmol/l	117	ISE direct
Cholesterol	mmol/l	7.36	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	
	mmol/l	7.27	Cholesterol Oxidase - IDMS
	mg/dl	281	
CK Total	U/l	550	CK-NAC (IFCC) 37°C
	U/l	344	CK-NAC (IFCC) 30°C
	U/l	234	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	380	Enzymatic UV method
	mg/dl	4.30	
	µmol/l	385	Creatinine PAP method
	mg/dl	4.35	
	µmol/l	403	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.55	
gamma-GT	U/l	184	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	145	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Glucose	mmol/l	16.0	Hexokinase
	mg/dl	288	
	mmol/l	15.8	Glucose oxidase
	mg/dl	285	
Iron	µmol/l	40.1	Colorimetric without ppt.
	µg/dl	224	
LD (LDH)	U/l	361	L->P IFCC 37°C
	U/l	261	L->P IFCC 30°C
	U/l	183	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	2.33	Phosphomolybdate enzymatic
	mg/dl	7.22	
	mmol/l	2.29	Phosphomolybdate UV
	mg/dl	7.10	
Potassium	mmol/l	6.04	ISE method - direct
Protein Total	g/l	46.5	Biuret reaction end point
	g/dl	4.65	
Sodium	mmol/l	155	ISE method - direct
Triglycerides	mmol/l	2.87	Lipase/GPO-PAP no correction
	mg/dl	254	
Urea	mmol/l	20.3	Urease end point
	mg/dl	122	
	mmol/l	20.7	Urease kinetic
	mg/dl	124	
	mmol/l	20.7	BUN
	mg/dl	58.1	
Uric Acid (Urate)	mmol/l	0.578	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.71	
	mmol/l	0.571	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.59	
	mmol/l	0.569	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	

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CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
a-HBDH	U/l	380	Oxobutyrate < 10 mmol/l 37°C
	U/l	287	Oxobutyrate < 10 mmol/l 30°C
	U/l	215	Oxobutyrate < 10 mmol/l 25°C
Albumin	g/l	30.3	Bromocresol Green
	g/dl	3.03	
	g/l	28.8	Bromocresol Purple
	g/dl	2.88	
	g/l	29.3	Turbidimetric Assays
	g/dl	2.93	
Alkaline Phosphatase	U/l	448	Diethanolamine buffer DEA 37°C
	U/l	349	Diethanolamine buffer DEA 30°C
	U/l	286	Diethanolamine buffer DEA 25°C
	U/l	362	AMP optimised to IFCC 37°C
	U/l	282	AMP optimised to IFCC 30°C
	U/l	231	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	341	Colorimetric 37°C
	U/l	266	Colorimetric 30°C
	U/l	218	Colorimetric 25°C
ALT (GPT)	U/l	155	Colorimetric 37°C
	U/l	115	Colorimetric 30°C
	U/l	87	Colorimetric 25°C
	U/l	160	Tris buffer with P5P 37°C
	U/l	118	Tris buffer with P5P 30°C
	U/l	90	Tris buffer with P5P 25°C
	U/l	150	Tris buffer without P5P 37°C
	U/l	111	Tris buffer without P5P 30°C
	U/l	84	Tris buffer without P5P 25°C
	U/l	153	Phosphate buffer DGKC 37°C
	U/l	113	Phosphate buffer DGKC 30°C
	U/l	86	Phosphate buffer DGKC 25°C
	U/l	151	Tris buffer with P5P NVKC 37°C
	U/l	112	Tris buffer with P5P NVKC 30°C
	U/l	85	Tris buffer with P5P NVKC 25°C
	U/l	151	Tris buffer SCE 37°C
	U/l	112	Tris buffer SCE 30°C
	U/l	85	Tris buffer SCE 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Amylase Pancreatic	U/l	261	Immunoinhibition EPS substrate 37°C
	U/l	255	Roche EPS Liquid 37°C
	U/l	297	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	298	pNP Maltotrioside substrates 37°C
	U/l	302	Siemens - blocked pNPG7 37°C
	U/l	240	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	315	Randox Liquid Ethylidene pNPG7 37°C
	U/l	283	Roche Integra 2-chloro-pNPG7 37°C
	U/l	282	Other Roche 2-chloro-pNPG7 37°C
	U/l	279	Roche liquid stable pNPG7 37°C
	U/l	342	Siemens 2-chloro-pNPG3 37°C
	U/l	300	Beckman Coulter - blocked pNPG7 37°C
	U/l	306	Beckman Synchron AMY7 37°C
	U/l	307	I.L. 2-chloro-pNPG3 37°C
	U/l	337	Abbott Architect IFCC Cal. 37°C
	U/l	318	Abbott Architect Non-IFCC Cal. 37°C
	U/l	288	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	279	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	148	Colorimetric 37°C
	U/l	100	Colorimetric 30°C
	U/l	70	Colorimetric 25°C
	U/l	180	Tris buffer with P5P 37°C
	U/l	122	Tris buffer with P5P 30°C
	U/l	86	Tris buffer with P5P 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	146	Phosphate buffer DGKC 37°C
	U/l	99	Phosphate buffer DGKC 30°C
	U/l	69	Phosphate buffer DGKC 25°C
	U/l	154	Tris buffer with P5P NVKC 37°C
	U/l	104	Tris buffer with P5P NVKC 30°C
	U/l	73	Tris buffer with P5P NVKC 25°C
	U/l	151	Tris buffer SCE 37°C
	U/l	102	Tris buffer SCE 30°C
	U/l	72	Tris buffer SCE 25°C
Bicarbonate	mmol/l	14.2	Colorimetric
	mmol/l	15.0	Differential rate pH change
	mmol/l	14.6	Enzymatic
	mmol/l	14.7	Manometric
Bile Acids	µmol/l	44.2	4th Generation Colorimetric
	µmol/l	45.6	5th Generation Colorimetric
Bilirubin Direct	µmol/l	36.1	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.11	

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CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Bilirubin Direct	µmol/l	37.8	Diazo with Sulphanilic Acid
	mg/dl	2.21	
	µmol/l	37.2	Diazo with Dichloroaniline (DCA)
	mg/dl	2.18	
	µmol/l	39.0	Oxidation to Biliverdin/Vanadate
	mg/dl	2.28	
	µmol/l	38.3	Modified Jendrassik
	mg/dl	2.24	
Bilirubin Total	µmol/l	95.3	Diazo with Dichloroaniline (DCA)
	mg/dl	5.57	
	µmol/l	93.9	Diazo with Sulphanilic Acid
	mg/dl	5.49	
	µmol/l	89.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.25	
	µmol/l	92.1	Nitrobenzenediazonium salt
	mg/dl	5.39	
	µmol/l	88.9	Diazonium ion
	mg/dl	5.20	
	µmol/l	105	Oxidation to Biliverdin/Vanadate
	mg/dl	6.13	
	µmol/l	104	Modified Jendrassik
	mg/dl	6.08	
Calcium	mmol/l	3.11	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.03	Ion selective electrode
	mg/dl	12.1	
	mmol/l	3.08	Methylthymol blue
	mg/dl	12.3	
	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
	mmol/l	2.99	Phosphonazo
	mg/dl	12.0	
	mmol/l	3.13	NM-BAPTA
	mg/dl	12.5	
Chloride	mmol/l	112	Colorimetric
	mmol/l	114	ISE indirect
	mmol/l	115	ISE direct
Cholesterol	mmol/l	7.38	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	
	mmol/l	7.45	Cholesterol Oxidase - IDMS
	mg/dl	288	
	mmol/l	7.40	Cholesterol Dehydrogenase
	mg/dl	286	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Cholinesterase	U/l	5192	Colorimetric Benzoylcholine 37°C
	U/l	5324	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	555	CK-NAC serum start (DGKC) 37°C
	U/l	347	CK-NAC serum start (DGKC) 30°C
	U/l	236	CK-NAC serum start (DGKC) 25°C
	U/l	550	CK-NAC substrate start (DGKC) 37°C
	U/l	344	CK-NAC substrate start (DGKC) 30°C
	U/l	234	CK-NAC substrate start (DGKC) 25°C
	U/l	548	CK-NAC (IFCC) 37°C
	U/l	343	CK-NAC (IFCC) 30°C
	U/l	233	CK-NAC (IFCC) 25°C
	U/l	577	Monothioglycerol 37°C
	U/l	361	Monothioglycerol 30°C
	U/l	245	Monothioglycerol 25°C
Copper	µmol/l	26.9	Atomic absorption
	µg/dl	171	
	µmol/l	26.0	Colorimetric
	µg/dl	165	
Creatinine	µmol/l	349	Alkaline picrate with deproteinization
	mg/dl	3.94	
	µmol/l	356	Alkaline picrate no deproteinization
	mg/dl	4.02	
	µmol/l	373	Enzymatic UV method
	mg/dl	4.22	
	µmol/l	373	Creatinine PAP method
	mg/dl	4.21	
	µmol/l	348	Jaffe rate blanked
	mg/dl	3.93	
	µmol/l	393	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.44	
	µmol/l	380	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.29	
	µmol/l	367	IDMS traceable
	mg/dl	4.15	
D-3-Hydroxybutyrate	mmol/l	1.16	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	179	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	141	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	Gamma glutamyl-4-nitroanilide 37°C
	U/l	134	Gamma glutamyl-4-nitroanilide 30°C
	U/l	105	Gamma glutamyl-4-nitroanilide 25°C
	U/l	188	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	148	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	116	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
gamma-GT	U/l	209	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	165	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	129	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	29	Triethanolamine buffer 50 mmol 37°C
	U/l	22	Triethanolamine buffer 50 mmol 30°C
	U/l	18	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.7	Glucose dehydrogenase
	mg/dl	283	
	mmol/l	15.8	Hexokinase
	mg/dl	285	
	mmol/l	15.5	Oxygen electrode
	mg/dl	279	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	38.0	Colorimetric with ppt.
	µg/dl	212	
	µmol/l	38.3	Colorimetric without ppt.
	µg/dl	214	
Lactate	mmol/l	5.32	Colorimetric Lactate Oxidase
	mg/dl	47.9	
	mmol/l	5.18	Ion selective electrode
	mg/dl	46.7	
	mmol/l	5.42	UV LDH
	mg/dl	48.8	
LD (LDH)	U/l	344	L->P 37°C
	U/l	248	L->P 30°C
	U/l	174	L->P 25°C
	U/l	741	P->L Scandinavian & Dutch 37°C
	U/l	535	P->L Scandinavian & Dutch 30°C
	U/l	376	P->L Scandinavian & Dutch 25°C
	U/l	710	P->L German methods 37°C
	U/l	513	P->L German methods 30°C
	U/l	360	P->L German methods 25°C
	U/l	717	P->L SFBC 37°C
	U/l	518	P->L SFBC 30°C
	U/l	364	P->L SFBC 25°C
	U/l	357	L->P IFCC 37°C
	U/l	258	L->P IFCC 30°C
	U/l	181	L->P IFCC 25°C
Lipase	U/l	66	Roche Colorimetric 37°C
	U/l	82	Randox Colorimetric 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Lithium	mmol/l	1.88	Flame photometry
	mg/dl	1.31	
	mmol/l	1.95	Ion selective electrode
	mg/dl	1.35	
	mmol/l	1.90	Spectrophotometric
	mg/dl	1.32	
Magnesium	mmol/l	1.75	Arsenazo III
	mg/dl	4.25	
	mmol/l	1.76	Atomic absorption
	mg/dl	4.28	
	mmol/l	1.70	Calmagite
	mg/dl	4.13	
	mmol/l	1.77	Xylidyl Blue
	mg/dl	4.30	
	mmol/l	1.79	Methylthymol blue
	mg/dl	4.35	
	mmol/l	1.77	Chlorphosphonazo III
	mg/dl	4.30	
	mmol/l	1.75	Enzymatic
	mg/dl	4.25	
Osmolality	mOsm/kg	350	Calculated
	mOsm/kg	384	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	6.28	Enzymatic
	mmol/l	5.93	Flame photometry
	mmol/l	6.01	ISE method - direct
	mmol/l	6.11	ISE method - indirect
	mmol/l	5.70	Colorimetric
Protein Total	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
	g/l	45.1	Biuret reaction kinetic
	g/dl	4.51	
Sodium	mmol/l	160	Enzymatic
	mmol/l	155	Flame photometry
	mmol/l	157	ISE method - direct
	mmol/l	160	ISE method - indirect
	mmol/l	152	Colorimetric
TIBC	µmol/l	36.5	Removal of excess free iron
	µg/dl	204	
	µmol/l	39.7	FE+UIBC(saturation with iron)
	µg/dl	222	

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CALIBRATION SERUM LEVEL 3 (CAL3)

MEAN OF ALL INSTRUMENTS Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
TIBC	µmol/l	38.1	Calculated from Transferrin
	µg/dl	213	
	µmol/l	45.6	Randox Direct
	µg/dl	255	
Triglycerides	mmol/l	2.83	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.81	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	249	
	mmol/l	2.83	L/G Kinase EP. no correction
	mg/dl	250	
	mmol/l	2.80	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	248	
	mmol/l	2.82	Lipase/Glycerol Dehydrogenase
	mg/dl	250	
Urea	mmol/l	21.4	Urease end point
	mg/dl	129	
	mmol/l	21.5	Urease kinetic
	mg/dl	129	
	mmol/l	19.8	Urease hypochlorite
	mg/dl	119	
	mmol/l	21.5	BUN
	mg/dl	60.3	
Uric Acid (Urate)	mmol/l	0.561	Uricase catalase 340nm
	mg/dl	9.42	
	mmol/l	0.576	Reduction methods
	mg/dl	9.68	
	mmol/l	0.569	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.56	
	mmol/l	0.561	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	
	mmol/l	0.561	Spectrophotometric at 280-290
	mg/dl	9.42	
	mmol/l	0.557	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	
Zinc	µmol/l	32.8	Atomic absorption
	µg/dl	214	
	µmol/l	36.2	Colorimetric with deproteinisation
	µg/dl	236	

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CALIBRATION SERUM LEVEL 3 (CAL3)

MINDRAY BS-200/300/400 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.4	Bromocresol Green
	g/dl	3.04	
Alkaline Phosphatase	U/l	387	AMP optimised to IFCC 37°C
	U/l	301	AMP optimised to IFCC 30°C
	U/l	247	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	161	Tris buffer without P5P 37°C
	U/l	119	Tris buffer without P5P 30°C
	U/l	91	Tris buffer without P5P 25°C
Amylase Total	U/l	304	pNP Maltotrioside substrates 37°C
	U/l	296	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	153	Tris buffer without P5P 37°C
	U/l	103	Tris buffer without P5P 30°C
	U/l	73	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	Colorimetric
	mmol/l	13.3	Enzymatic
Bilirubin Direct	µmol/l	42.8	Oxidation to Biliverdin/Vanadate
	mg/dl	2.50	
Bilirubin Total	µmol/l	98.6	Diazo with Dichloroaniline (DCA)
	mg/dl	5.77	
	µmol/l	97.5	Diazo with Sulphanilic Acid
	mg/dl	5.70	
	µmol/l	91.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.38	
	µmol/l	96.4	Oxidation to Biliverdin/Vanadate
	mg/dl	5.64	
Calcium	mmol/l	3.09	Cresolphthalein complexone
	mg/dl	12.4	
	mmol/l	3.23	Ion selective electrode
	mg/dl	12.9	
	mmol/l	3.14	Arsenazo III
	mg/dl	12.6	
Cholesterol	mmol/l	7.41	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	
	mmol/l	7.39	Cholesterol Oxidase - IDMS
	mg/dl	285	
	mmol/l	7.34	Cholesterol Dehydrogenase
	mg/dl	283	
Cholinesterase	U/l	5382	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	586	CK-NAC substrate start (DGKC) 37°C
	U/l	367	CK-NAC substrate start (DGKC) 30°C
	U/l	249	CK-NAC substrate start (DGKC) 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

MINDRAY BS-200/300/400 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
CK Total	U/l	563	CK-NAC (IFCC) 37°C
	U/l	352	CK-NAC (IFCC) 30°C
	U/l	239	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	330	Alkaline picrate with deproteinization
	mg/dl	3.73	
	µmol/l	350	Alkaline picrate no deproteinization
	mg/dl	3.95	
	µmol/l	383	Enzymatic UV method
	mg/dl	4.33	
	µmol/l	374	Creatinine PAP method
	mg/dl	4.22	
	µmol/l	352	Jaffe rate blanked
	mg/dl	3.97	
gamma-GT	U/l	182	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	143	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	112	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	186	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	37.7	Colorimetric with ppt.
	µg/dl	211	
	µmol/l	38.4	Colorimetric without ppt.
	µg/dl	215	
LD (LDH)	U/l	694	P->L SFBC 37°C
	U/l	501	P->L SFBC 30°C
	U/l	352	P->L SFBC 25°C
	U/l	360	L->P IFCC 37°C
	U/l	260	L->P IFCC 30°C
	U/l	183	L->P IFCC 25°C
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
Phosphate Inorganic	mmol/l	2.11	Phosphomolybdate enzymatic
	mg/dl	6.54	
	mmol/l	2.15	Phosphomolybdate UV
	mg/dl	6.67	
Protein Total	g/l	48.3	Biuret reaction end point
	g/dl	4.83	

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CALIBRATION SERUM LEVEL 3 (CAL3)

MINDRAY BS-200/300/400 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Protein Total	g/l	46.2	Biuret reaction kinetic
	g/dl	4.62	
TIBC	µmol/l	39.2	FE+UIBC(saturation with iron)
	µg/dl	219	
Triglycerides	mmol/l	2.79	Lipase/GPO-PAP no correction
	mg/dl	247	
	mmol/l	2.79	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	
	mmol/l	2.79	L/G Kinase EP. no correction
	mg/dl	247	
	mmol/l	2.78	Lipase/Glycerol Dehydrogenase
	mg/dl	246	
Urea	mmol/l	20.9	Urease end point
	mg/dl	126	
	mmol/l	21.7	Urease kinetic
	mg/dl	130	
	mmol/l	21.7	BUN
	mg/dl	60.9	
Uric Acid (Urate)	mmol/l	0.548	Uricase catalase 340nm
	mg/dl	9.21	
	mmol/l	0.562	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	
	mmol/l	0.558	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	
	mmol/l	0.540	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	

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CALIBRATION SERUM LEVEL 3 (CAL3)

PRESTIGE 24i Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.4	Bromocresol Green
	g/dl	3.04	
Alkaline Phosphatase	U/l	380	AMP optimised to IFCC 37°C
	U/l	296	AMP optimised to IFCC 30°C
	U/l	243	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	159	Tris buffer without P5P 37°C
	U/l	118	Tris buffer without P5P 30°C
	U/l	90	Tris buffer without P5P 25°C
Amylase Total	U/l	316	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	152	Tris buffer without P5P 37°C
	U/l	103	Tris buffer without P5P 30°C
	U/l	72	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	107	Diazo with Sulphanilic Acid
	mg/dl	6.23	
	µmol/l	100	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.86	
	µmol/l	109	Oxidation to Biliverdin/Vanadate
	mg/dl	6.36	
Calcium	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
Cholesterol	mmol/l	7.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	
	mmol/l	7.52	Cholesterol Oxidase - IDMS
	mg/dl	290	
CK Total	U/l	586	CK-NAC (IFCC) 37°C
	U/l	367	CK-NAC (IFCC) 30°C
	U/l	249	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	343	Alkaline picrate no deproteinization
	mg/dl	3.88	
	µmol/l	331	Jaffe rate blanked
	mg/dl	3.74	
gamma-GT	U/l	185	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	146	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	38.0	Colorimetric without ppt.
	µg/dl	212	
LD (LDH)	U/l	732	P->L German methods 37°C
	U/l	529	P->L German methods 30°C
	U/l	371	P->L German methods 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

PRESTIGE 24i Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Magnesium	mmol/l	1.69	Xylidyl Blue
	mg/dl	4.11	
Phosphate Inorganic	mmol/l	2.34	Phosphomolybdate UV
	mg/dl	7.25	
Protein Total	g/l	48.0	Biuret reaction end point
	g/dl	4.80	
Triglycerides	mmol/l	2.83	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.85	L/G Kinase EP. no correction
	mg/dl	252	
Urea	mmol/l	21.3	Urease kinetic
	mg/dl	128	
	mmol/l	21.3	BUN
	mg/dl	59.8	
Uric Acid (Urate)	mmol/l	0.572	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.61	
	mmol/l	0.554	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.31	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas 6000 c501 e601 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Acid Phosphatase (Total)	U/l	49.7	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	31.4	Bromocresol Green
	g/dl	3.14	
	g/l	30.3	Bromocresol Purple
	g/dl	3.03	
	g/l	28.9	Turbidimetric Assays
	g/dl	2.89	
Alkaline Phosphatase	U/l	329	Roche Integra AMP buffer 37°C
	U/l	256	Roche Integra AMP buffer 30°C
	U/l	210	Roche Integra AMP buffer 25°C
	U/l	321	AMP optimised to IFCC 37°C
	U/l	250	AMP optimised to IFCC 30°C
	U/l	205	AMP optimised to IFCC 25°C
	U/l	331	Colorimetric 37°C
	U/l	258	Colorimetric 30°C
	U/l	212	Colorimetric 25°C
ALT (GPT)	U/l	149	Colorimetric 37°C
	U/l	110	Colorimetric 30°C
	U/l	84	Colorimetric 25°C
	U/l	144	Tris buffer without P5P 37°C
	U/l	107	Tris buffer without P5P 30°C
	U/l	81	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	264	Immunoinhibition EPS substrate 37°C
	U/l	253	Roche EPS Liquid 37°C
Amylase Total	U/l	288	Randox Liquid Ethylidene pNPG7 37°C
	U/l	275	Roche Integra 2-chloro-pNPG7 37°C
	U/l	282	Other Roche 2-chloro-pNPG7 37°C
	U/l	278	Roche liquid stable pNPG7 37°C
	U/l	279	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	143	Tris buffer without P5P 37°C
	U/l	97	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	Colorimetric
	mmol/l	14.3	Enzymatic
Bilirubin Direct	µmol/l	40.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.35	
	µmol/l	40.1	Diazo with Sulphanilic Acid
	mg/dl	2.35	
	µmol/l	40.4	Roche DPD JG standardised
	mg/dl	2.36	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas 6000 c501 e601 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Bilirubin Direct	µmol/l	40.1	Diazo with Dichloroaniline (DCA)
	mg/dl	2.35	
	µmol/l	37.4	Roche DPD Doumas standardised
	mg/dl	2.19	
Bilirubin Total	µmol/l	86.8	Diazo with Dichloroaniline (DCA)
	mg/dl	5.08	
	µmol/l	85.8	Diazo with Sulphanilic Acid
	mg/dl	5.02	
	µmol/l	86.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.05	
	µmol/l	87.6	Nitrobenzenediazonium salt
	mg/dl	5.13	
	µmol/l	86.1	Diazonium ion
	mg/dl	5.04	
Calcium	mmol/l	3.13	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.14	Arsenazo III
	mg/dl	12.6	
	mmol/l	3.14	NM-BAPTA
	mg/dl	12.6	
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.33	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	
	mmol/l	7.34	Cholesterol Oxidase - IDMS
	mg/dl	283	
	mmol/l	7.25	Cholesterol Dehydrogenase
	mg/dl	280	
Cholinesterase	U/l	5164	Colorimetric Benzoylcholine 37°C
	U/l	5232	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	540	CK-NAC serum start (DGKC) 37°C
	U/l	338	CK-NAC serum start (DGKC) 30°C
	U/l	230	CK-NAC serum start (DGKC) 25°C
	U/l	543	CK-NAC substrate start (DGKC) 37°C
	U/l	340	CK-NAC substrate start (DGKC) 30°C
	U/l	231	CK-NAC substrate start (DGKC) 25°C
	U/l	544	CK-NAC (IFCC) 37°C
	U/l	341	CK-NAC (IFCC) 30°C
	U/l	231	CK-NAC (IFCC) 25°C
Copper	µmol/l	24.6	Colorimetric
	µg/dl	157	
Creatinine	µmol/l	367	Alkaline picrate no deproteinization
	mg/dl	4.15	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas 6000 c501 e601 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Creatinine	µmol/l	383	Enzymatic UV method
	mg/dl	4.33	
	µmol/l	379	Creatinine PAP method
	mg/dl	4.28	
	µmol/l	383	Roche Creatinine Plus
	mg/dl	4.33	
	µmol/l	364	Jaffe rate blanked
	mg/dl	4.11	
	µmol/l	393	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.44	
	µmol/l	386	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.36	
	µmol/l	379	IDMS traceable
	mg/dl	4.28	
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
	U/l	193	Gamma glutamyl-4-nitroanilide 37°C
	U/l	152	Gamma glutamyl-4-nitroanilide 30°C
	U/l	119	Gamma glutamyl-4-nitroanilide 25°C
	U/l	194	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	153	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	120	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	Glucose dehydrogenase
	mg/dl	281	
	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	38.5	Colorimetric with ppt.
	µg/dl	215	
	µmol/l	38.3	Colorimetric without ppt.
	µg/dl	214	
Lactate	mmol/l	5.35	Colorimetric Lactate Oxidase
	mg/dl	48.2	
LD (LDH)	U/l	357	L->P 37°C
	U/l	258	L->P 30°C
	U/l	181	L->P 25°C
	U/l	372	P->L Scandinavian & Dutch 37°C
	U/l	269	P->L Scandinavian & Dutch 30°C
	U/l	189	P->L Scandinavian & Dutch 25°C
	U/l	362	L->P IFCC 37°C
	U/l	261	L->P IFCC 30°C
	U/l	184	L->P IFCC 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas 6000 c501 e601 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Lipase	U/l	66	Other Colorimetric 37°C
	U/l	67	Roche Colorimetric 37°C
	U/l	67	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.91	Ion selective electrode
	mg/dl	1.33	
	mmol/l	1.90	Spectrophotometric
	mg/dl	1.32	
Magnesium	mmol/l	1.79	Arsenazo III
	mg/dl	4.35	
	mmol/l	1.77	Atomic absorption
	mg/dl	4.30	
	mmol/l	1.77	Xylidyl Blue
	mg/dl	4.30	
	mmol/l	1.76	Methylthymol blue
	mg/dl	4.28	
	mmol/l	1.77	Chlorphosphonazo III
	mg/dl	4.30	
	mmol/l	1.70	Enzymatic
	mg/dl	4.13	
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	6.15	ISE method - indirect
Protein Total	g/l	44.7	Biuret reaction end point
	g/dl	4.47	
	g/l	44.5	Biuret reaction kinetic
	g/dl	4.45	
Sodium	mmol/l	160	ISE method - indirect
TIBC	µmol/l	38.8	FE+UIBC(saturation with iron)
	µg/dl	217	
	µmol/l	37.6	Direct Colorimetric
	µg/dl	210	
	µmol/l	40.4	Calculated from Transferrin
	µg/dl	226	
Triglycerides	mmol/l	2.84	Lipase/GPO-PAP no correction
	mg/dl	251	
	mmol/l	2.82	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	
	mmol/l	2.85	L/G Kinase EP. no correction
	mg/dl	252	
	mmol/l	2.86	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	253	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas 6000 c501 e601 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.84	Lipase/Glycerol Dehydrogenase
	mg/dl	251	
Urea	mmol/l	21.4	Urease end point
	mg/dl	129	
	mmol/l	21.7	Urease kinetic
	mg/dl	130	
	mmol/l	21.7	BUN
	mg/dl	60.9	
Uric Acid (Urate)	mmol/l	0.546	Uricase catalase 340nm
	mg/dl	9.17	
	mmol/l	0.551	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	
	mmol/l	0.553	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	
	mmol/l	0.551	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	
Zinc	µmol/l	37.6	Colorimetric with deproteinisation
	µg/dl	246	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas C111® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	31.6	Bromocresol Green
	g/dl	3.16	
Alkaline Phosphatase	U/l	331	Roche Integra AMP buffer 37°C
	U/l	258	Roche Integra AMP buffer 30°C
	U/l	212	Roche Integra AMP buffer 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 Total	U/l	282	Other Roche 2-chloro-pNPG7 37°C
	U/l	284	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	Tris buffer without P5P 37°C
	U/l	97	Tris buffer without P5P 30°C
	U/l	69	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	39.3	Diazo with Sulphanilic Acid
	mg/dl	2.30	
	µmol/l	42.2	Roche DPD JG standardised
	mg/dl	2.47	
	µmol/l	40.7	Diazo with Dichloroaniline (DCA)
	mg/dl	2.38	
Bilirubin Total	µmol/l	82.6	Diazo with Sulphanilic Acid
	mg/dl	4.83	
	µmol/l	88.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.17	
	µmol/l	86.1	Diazonium ion
	mg/dl	5.04	
Calcium	mmol/l	3.14	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
	mmol/l	3.12	NM-BAPTA
	mg/dl	12.5	
Chloride	mmol/l	117	ISE indirect
Cholesterol	mmol/l	7.39	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	
	mmol/l	7.33	Cholesterol Oxidase - IDMS
	mg/dl	283	
CK Total	U/l	539	CK-NAC (IFCC) 37°C
	U/l	337	CK-NAC (IFCC) 30°C
	U/l	229	CK-NAC (IFCC) 25°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

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Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
CK Total	U/l	539	Creatinine phosphate substrate Start 37°C
	U/l	337	Creatinine phosphate substrate Start 30°C
	U/l	229	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	351	Alkaline picrate no deproteinization
	mg/dl	3.97	
	µmol/l	366	Roche Creatinine Plus
	mg/dl	4.13	
	µmol/l	347	Jaffe rate blanked
	mg/dl	3.92	
	µmol/l	380	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	
	µmol/l	374	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.23	
gamma-GT	U/l	180	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	142	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	111	Gamma glutamyl.-3-carboxy-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	15.8	Hexokinase
	mg/dl	285	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	38.2	Colorimetric without ppt.
	µg/dl	214	
LD (LDH)	U/l	364	L->P IFCC 37°C
	U/l	263	L->P IFCC 30°C
	U/l	185	L->P IFCC 25°C
Lipase	U/l	59	Roche Colorimetric 37°C
Magnesium	mmol/l	1.74	Xylidyl Blue
	mg/dl	4.23	
	mmol/l	1.76	Chlorphosphonazo III
	mg/dl	4.28	
Phosphate Inorganic	mmol/l	2.34	Phosphomolybdate UV
	mg/dl	7.25	
Potassium	mmol/l	6.08	ISE method - indirect
Protein Total	g/l	45.7	Biuret reaction end point
	g/dl	4.57	
Sodium	mmol/l	159	ISE method - indirect
Triglycerides	mmol/l	2.84	Lipase/GPO-PAP no correction
	mg/dl	251	
	mmol/l	2.90	L/G Kinase EP. no correction
	mg/dl	257	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas C111® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.82	Lipase/Glycerol Dehydrogenase
	mg/dl	250	
Urea	mmol/l	20.8	Urease kinetic
	mg/dl	125	
	mmol/l	20.8	BUN
	mg/dl	58.4	
Uric Acid (Urate)	mmol/l	0.564	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.48	
	mmol/l	0.567	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	
	mmol/l	0.546	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas C311® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	31.3	Bromocresol Green
	g/dl	3.13	
	g/l	31.3	Bromocresol Purple
	g/dl	3.13	
Alkaline Phosphatase	U/l	324	Roche Integra AMP buffer 37°C
	U/l	252	Roche Integra AMP buffer 30°C
	U/l	207	Roche Integra AMP buffer 25°C
	U/l	318	AMP optimised to IFCC 37°C
	U/l	248	AMP optimised to IFCC 30°C
	U/l	203	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	145	Tris buffer without P5P 37°C
	U/l	107	Tris buffer without P5P 30°C
	U/l	82	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	270	Immunoinhibition EPS substrate 37°C
	U/l	254	Roche EPS Liquid 37°C
Amylase Total	U/l	288	Roche Integra 2-chloro-pNPG7 37°C
	U/l	279	Other Roche 2-chloro-pNPG7 37°C
	U/l	280	Roche liquid stable pNPG7 37°C
	U/l	280	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	135	Colorimetric 37°C
	U/l	91	Colorimetric 30°C
	U/l	64	Colorimetric 25°C
	U/l	144	Tris buffer without P5P 37°C
	U/l	97	Tris buffer without P5P 30°C
	U/l	69	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	Enzymatic
Bilirubin Direct	µmol/l	38.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.28	
	µmol/l	39.3	Diazo with Sulphanilic Acid
	mg/dl	2.30	
	µmol/l	39.5	Roche DPD JG standardised
	mg/dl	2.31	
Bilirubin Total	µmol/l	87.2	Diazo with Dichloroaniline (DCA)
	mg/dl	5.10	
	µmol/l	86.5	Diazo with Sulphanilic Acid
	mg/dl	5.06	
	µmol/l	87.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.09	
	µmol/l	86.6	Diazonium ion
	mg/dl	5.06	

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Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Calcium	mmol/l	3.14	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
	mmol/l	3.13	NM-BAPTA
	mg/dl	12.5	
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.25	Cholesterol Oxidase - Abell Kendall
	mg/dl	280	
	mmol/l	7.40	Cholesterol Oxidase - IDMS
	mg/dl	286	
	mmol/l	6.92	Cholesterol Dehydrogenase
	mg/dl	267	
Cholinesterase	U/l	5180	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	553	CK-NAC substrate start (DGKC) 37°C
	U/l	346	CK-NAC substrate start (DGKC) 30°C
	U/l	235	CK-NAC substrate start (DGKC) 25°C
	U/l	542	CK-NAC (IFCC) 37°C
	U/l	339	CK-NAC (IFCC) 30°C
	U/l	230	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	372	Alkaline picrate no deproteinization
	mg/dl	4.20	
	µmol/l	380	Roche Creatinine Plus
	mg/dl	4.29	
	µmol/l	376	Jaffe rate blanked
	mg/dl	4.24	
	µmol/l	400	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.52	
	µmol/l	388	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.38	
gamma-GT	U/l	175	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	138	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	108	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	191	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	151	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	118	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	38.2	Colorimetric with ppt.
	µg/dl	214	

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Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Iron	µmol/l	38.2	Colorimetric without ppt.
	µg/dl	214	
Lactate	mmol/l	5.23	Colorimetric Lactate Oxidase
	mg/dl	47.1	
LD (LDH)	U/l	374	L->P 37°C
	U/l	270	L->P 30°C
	U/l	190	L->P 25°C
	U/l	362	P->L German methods 37°C
	U/l	261	P->L German methods 30°C
	U/l	184	P->L German methods 25°C
	U/l	363	L->P IFCC 37°C
	U/l	262	L->P IFCC 30°C
	U/l	184	L->P IFCC 25°C
Lipase	U/l	65	Roche Colorimetric 37°C
	U/l	65	Roche Turbidimetric with colipase 37°C
Magnesium	mmol/l	1.75	Atomic absorption
	mg/dl	4.25	
	mmol/l	1.76	Xylidyl Blue
	mg/dl	4.28	
	mmol/l	1.74	Methylthymol blue
	mg/dl	4.23	
	mmol/l	1.76	Chlorphosphonazo III
	mg/dl	4.28	
Phosphate Inorganic	mmol/l	2.24	Phosphomolybdate enzymatic
	mg/dl	6.94	
	mmol/l	2.24	Phosphomolybdate UV
	mg/dl	6.94	
Potassium	mmol/l	6.16	ISE method - indirect
Protein Total	g/l	44.6	Biuret reaction end point
	g/dl	4.46	
	g/l	45.4	Biuret reaction kinetic
	g/dl	4.54	
Sodium	mmol/l	160	ISE method - indirect
TIBC	µmol/l	38.8	FE+UIBC(saturation with iron)
	µg/dl	217	
	µmol/l	39.1	Direct Colorimetric
	µg/dl	219	
Triglycerides	mmol/l	2.84	Lipase/GPO-PAP no correction
	mg/dl	251	
	mmol/l	2.84	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	
	mmol/l	2.82	L/G Kinase EP. no correction
	mg/dl	250	

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CALIBRATION SERUM LEVEL 3 (CAL3)

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Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.78	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	246	
	mmol/l	2.83	Lipase/Glycerol Dehydrogenase
	mg/dl	250	
Urea	mmol/l	21.6	Urease end point
	mg/dl	130	
	mmol/l	21.7	Urease kinetic
	mg/dl	130	
	mmol/l	21.7	BUN
	mg/dl	60.9	
Uric Acid (Urate)	mmol/l	0.551	Uricase catalase 340nm
	mg/dl	9.26	
	mmol/l	0.555	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.32	
	mmol/l	0.553	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	
	mmol/l	0.556	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas c701 / c702 / c711 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	31.5	Bromocresol Green
	g/dl	3.15	
	g/l	28.6	Bromocresol Purple
	g/dl	2.86	
	g/l	27.8	Turbidimetric Assays
	g/dl	2.78	
Alkaline Phosphatase	U/l	323	Roche Integra AMP buffer 37°C
	U/l	252	Roche Integra AMP buffer 30°C
	U/l	206	Roche Integra AMP buffer 25°C
	U/l	330	Colorimetric 37°C
	U/l	257	Colorimetric 30°C
	U/l	211	Colorimetric 25°C
ALT (GPT)	U/l	145	Tris buffer without P5P 37°C
	U/l	107	Tris buffer without P5P 30°C
	U/l	82	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	251	Immunoinhibition EPS substrate 37°C
	U/l	257	Roche EPS Liquid 37°C
Amylase Total	U/l	280	Roche liquid stable pNPG7 37°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
Bicarbonate	mmol/l	14.6	Enzymatic
Bilirubin Direct	µmol/l	41.1	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.40	
	µmol/l	41.3	Roche DPD JG standardised
	mg/dl	2.42	
Bilirubin Total	µmol/l	85.3	Diazo with Sulphanilic Acid
	mg/dl	4.99	
	µmol/l	86.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.07	
	µmol/l	86.7	Diazonium ion
	mg/dl	5.07	
Calcium	mmol/l	3.13	Cresolphthalein complexone
	mg/dl	12.5	
	mmol/l	3.13	NM-BAPTA
	mg/dl	12.5	
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.37	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas c701 / c702 / c711 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Cholesterol	mmol/l	7.40	Cholesterol Oxidase - IDMS
	mg/dl	286	
Cholinesterase	U/l	5196	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	514	CK-NAC substrate start (DGKC) 37°C
	U/l	322	CK-NAC substrate start (DGKC) 30°C
	U/l	218	CK-NAC substrate start (DGKC) 25°C
	U/l	535	CK-NAC (IFCC) 37°C
	U/l	335	CK-NAC (IFCC) 30°C
	U/l	227	CK-NAC (IFCC) 25°C
Copper	µmol/l	28.1	Colorimetric
	µg/dl	179	
Creatinine	µmol/l	385	Roche Creatinine Plus
	mg/dl	4.35	
	µmol/l	399	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.51	
	µmol/l	391	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.42	
	µmol/l	374	IDMS traceable
	mg/dl	4.23	
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	191	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	151	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	118	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	Hexokinase
	mg/dl	280	
Iron	µmol/l	37.0	Colorimetric without ppt.
	µg/dl	207	
Lactate	mmol/l	5.34	Colorimetric Lactate Oxidase
	mg/dl	48.1	
LD (LDH)	U/l	365	L->P IFCC 37°C
	U/l	264	L->P IFCC 30°C
	U/l	185	L->P IFCC 25°C
Lipase	U/l	67	Roche Colorimetric 37°C
Lithium	mmol/l	1.90	Spectrophotometric
	mg/dl	1.32	
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
	mmol/l	1.78	Chlorphosphonazo III
	mg/dl	4.33	
Phosphate Inorganic	mmol/l	2.22	Phosphomolybdate UV
	mg/dl	6.88	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Roche Cobas c701 / c702 / c711 Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Potassium	mmol/l	6.16	ISE method - indirect
Protein Total	g/l	44.7	Biuret reaction end point
	g/dl	4.47	
Sodium	mmol/l	161	ISE method - indirect
TIBC	µmol/l	38.1	FE+UIBC(saturation with iron)
	µg/dl	213	
Triglycerides	mmol/l	2.83	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.83	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	
	mmol/l	2.85	L/G Kinase EP. no correction
	mg/dl	252	
	mmol/l	2.83	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	
	mmol/l	2.86	Lipase/Glycerol Dehydrogenase
	mg/dl	253	
Urea	mmol/l	21.5	Urease kinetic
	mg/dl	129	
	mmol/l	21.5	BUN
	mg/dl	60.3	
Uric Acid (Urate)	mmol/l	0.550	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	
	mmol/l	0.546	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	
	mmol/l	0.550	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.24	

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CALIBRATION SERUM LEVEL 3 (CAL3)

RX SERIES® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.4	Bromocresol Green
	g/dl	3.04	
Alkaline Phosphatase	U/l	545	Diethanolamine buffer DEA 37°C
	U/l	382	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	159	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	297	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	315	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	162	Tris buffer without P5P 37°C
Bile Acids	µmol/l	45.6	5th Generation Colorimetric
Bilirubin Direct	µmol/l	37.6	Diazo with Sulphanilic Acid
	mg/dl	2.20	
	µmol/l	36.6	Oxidation to Biliverdin/Vanadate
	mg/dl	2.14	
Bilirubin Total	µmol/l	92.6	Diazo with Sulphanilic Acid
	mg/dl	5.42	
	µmol/l	99.2	Oxidation to Biliverdin/Vanadate
	mg/dl	5.80	
Calcium	mmol/l	3.03	Arsenazo III
	mg/dl	12.1	
Cholesterol	mmol/l	7.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	306	
CK Total	U/l	629	CK-NAC substrate start (DGKC) 37°C
	U/l	627	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	323	Alkaline picrate no deproteinization
	mg/dl	3.65	
	µmol/l	387	Enzymatic UV method
	mg/dl	4.37	
gamma-GT	U/l	209	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	165	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	129	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	39.5	Colorimetric without ppt.
	µg/dl	221	
Lactate	mmol/l	5.30	Colorimetric Lactate Oxidase
	mg/dl	47.8	
LD (LDH)	U/l	747	P->L German methods 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

RX SERIES® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
LD (LDH)	U/l	358	L->P IFCC 37°C
Lipase	U/l	82	Randox Colorimetric 37°C
Magnesium	mmol/l	1.72	Xylidyl Blue
	mg/dl	4.18	
Phosphate Inorganic	mmol/l	2.15	Phosphomolybdate UV
	mg/dl	6.67	
Potassium	mmol/l	6.28	Enzymatic
Protein Total	g/l	46.8	Biuret reaction end point
	g/dl	4.68	
Sodium	mmol/l	160	Enzymatic
TIBC	µmol/l	45.6	Direct Colorimetric
	µg/dl	255	
Triglycerides	mmol/l	2.85	Lipase/GPO-PAP no correction
	mg/dl	252	
Urea	mmol/l	20.8	Urease kinetic
	mg/dl	125	
	mmol/l	20.8	BUN
	mg/dl	58.2	
Uric Acid (Urate)	mmol/l	0.598	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.0	
	mmol/l	0.562	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.44	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.1	Bromocresol Green
	g/dl	3.01	
Alkaline Phosphatase	U/l	410	Diethanolamine buffer DEA 37°C
	U/l	326	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	164	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	276	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	297	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	157	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	Enzymatic
Bile Acids	µmol/l	44.5	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	37.8	Oxidation to Biliverdin/Vanadate
	mg/dl	2.21	
Bilirubin Total	µmol/l	108	Oxidation to Biliverdin/Vanadate
	mg/dl	6.32	
Calcium	mmol/l	3.11	Arsenazo III
	mg/dl	12.5	
Chloride	mmol/l	116	ISE indirect
Cholesterol	mmol/l	7.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	
	mmol/l	7.63	Cholesterol Oxidase - IDMS
	mg/dl	295	
Cholinesterase	U/l	5986	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	586	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	357	Alkaline picrate no deproteinization
	mg/dl	4.03	
	µmol/l	373	Enzymatic UV method
	mg/dl	4.22	
	µmol/l	373	Creatinine PAP method
	mg/dl	4.22	
	µmol/l	366	Jaffe rate blanked
	mg/dl	4.13	
	µmol/l	396	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.47	
	µmol/l	392	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.43	
gamma-GT	U/l	174	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	176	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.4	Hexokinase
	mg/dl	278	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Glucose	mmol/l	15.2	Glucose oxidase
	mg/dl	274	
Iron	µmol/l	39.5	Colorimetric with ppt.
	µg/dl	221	
	µmol/l	39.0	Colorimetric without ppt.
	µg/dl	218	
Lactate	mmol/l	5.08	Colorimetric Lactate Oxidase
	mg/dl	45.8	
LD (LDH)	U/l	351	L->P 37°C
	U/l	710	P->L German methods 37°C
	U/l	359	L->P IFCC 37°C
Lipase	U/l	77	Other Colorimetric 37°C
Lithium	mmol/l	1.91	Spectrophotometric
	mg/dl	1.33	
Magnesium	mmol/l	1.74	Xylidyl Blue
	mg/dl	4.23	
Phosphate Inorganic	mmol/l	2.32	Phosphomolybdate UV
	mg/dl	7.19	
Potassium	mmol/l	6.18	ISE method - indirect
Protein Total	g/l	44.6	Biuret reaction end point
	g/dl	4.46	
	g/l	45.3	Biuret reaction kinetic
	g/dl	4.53	
Sodium	mmol/l	161	ISE method - indirect
TIBC	µmol/l	46.0	FE+UIBC(saturation with iron)
	µg/dl	257	
	µmol/l	45.3	Direct Colorimetric
	µg/dl	253	
Triglycerides	mmol/l	2.94	Lipase/GPO-PAP no correction
	mg/dl	260	
	mmol/l	2.94	L/G Kinase EP. no correction
	mg/dl	260	
Urea	mmol/l	22.4	Urease end point
	mg/dl	135	
	mmol/l	22.3	Urease kinetic
	mg/dl	134	
	mmol/l	22.3	BUN
	mg/dl	62.6	
Uric Acid (Urate)	mmol/l	0.574	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.64	
	mmol/l	0.575	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	
	mmol/l	0.569	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Siemens Atellica Solution Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	30.1	Bromocresol Green
	g/dl	3.01	
	g/l	28.7	Bromocresol Purple
	g/dl	2.87	
Alkaline Phosphatase	U/l	337	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	170	Colorimetric 37°C
	U/l	170	Tris buffer without P5P 37°C
	U/l	171	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	279	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	308	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	162	Tris buffer without P5P 37°C
	U/l	165	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.7	Enzymatic
Bilirubin Direct	µmol/l	40.8	Oxidation to Biliverdin/Vanadate
	mg/dl	2.39	
Bilirubin Total	µmol/l	109	Oxidation to Biliverdin/Vanadate
	mg/dl	6.37	
Calcium	mmol/l	3.20	Cresolphthalein complexone
	mg/dl	12.8	
	mmol/l	3.18	Arsenazo III
	mg/dl	12.7	
Chloride	mmol/l	118	ISE indirect
Cholesterol	mmol/l	7.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	
	mmol/l	7.68	Dimension-Siemens reagents
	mg/dl	296	
	mmol/l	7.75	Cholesterol Oxidase - IDMS
	mg/dl	299	
Cholinesterase	U/l	6456	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	569	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	371	Alkaline picrate no deproteinization
	mg/dl	4.19	
	µmol/l	376	Enzymatic UV method
	mg/dl	4.25	
	µmol/l	374	Creatinine PAP method
	mg/dl	4.23	
	µmol/l	370	Jaffe rate blanked
	mg/dl	4.18	
	µmol/l	394	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.45	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Siemens Atellica Solution Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
gamma-GT	U/l	171	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	173	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.5	Hexokinase
	mg/dl	279	
	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	39.3	Colorimetric with ppt.
	µg/dl	220	
	µmol/l	39.1	Colorimetric without ppt.
	µg/dl	219	
Lactate	mmol/l	5.32	Colorimetric Lactate Oxidase
	mg/dl	47.9	
LD (LDH)	U/l	354	L->P 37°C
	U/l	348	L->P IFCC 37°C
Lipase	U/l	72	Other Colorimetric 37°C
Lithium	mmol/l	1.84	Spectrophotometric
	mg/dl	1.28	
Magnesium	mmol/l	1.77	Xylidyl Blue
	mg/dl	4.30	
Phosphate Inorganic	mmol/l	2.33	Phosphomolybdate UV
	mg/dl	7.22	
Potassium	mmol/l	5.97	ISE method - indirect
Protein Total	g/l	44.6	Biuret reaction end point
	g/dl	4.46	
Sodium	mmol/l	159	ISE method - indirect
TIBC	µmol/l	47.1	FE+UIBC(saturation with iron)
	µg/dl	263	
	µmol/l	46.7	Direct Colorimetric
	µg/dl	261	
Triglycerides	mmol/l	3.04	Lipase/GPO-PAP no correction
	mg/dl	269	
	mmol/l	3.07	L/G Kinase EP. no correction
	mg/dl	272	
Urea	mmol/l	22.6	Urease end point
	mg/dl	136	
	mmol/l	22.4	Urease kinetic
	mg/dl	135	
	mmol/l	22.8	Urease hypochlorite
	mg/dl	137	
	mmol/l	22.4	BUN
	mg/dl	62.9	
Uric Acid (Urate)	mmol/l	0.582	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.78	

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CALIBRATION SERUM LEVEL 3 (CAL3)

Siemens Atellica Solution Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.576	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.68	
	mmol/l	0.574	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.64	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION EXL® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	29.3	Bromocresol Green
	g/dl	2.93	
	g/l	28.6	Bromocresol Purple
	g/dl	2.86	
Alkaline Phosphatase	U/l	334	Siemens Dimension AMP buffer 37°C
	U/l	333	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	168	Tris buffer with P5P 37°C
	U/l	168	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	341	Siemens - maltopenta/hexaoside 37°C
	U/l	342	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	187	Tris buffer with P5P 37°C
	U/l	187	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.4	Enzymatic
Bilirubin Direct	µmol/l	26.7	Diazo with Sulphanilic Acid
	mg/dl	1.56	
	µmol/l	26.2	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.53	
Bilirubin Total	µmol/l	94.2	Diazo with Sulphanilic Acid
	mg/dl	5.51	
Calcium	mmol/l	3.08	Cresolphthalein complexone
	mg/dl	12.3	
Chloride	mmol/l	116	ISE indirect
Cholesterol	mmol/l	7.05	Cholesterol Oxidase - Abell Kendall
	mg/dl	272	
	mmol/l	7.02	Dimension-Siemens reagents
	mg/dl	271	
Cholinesterase	U/l	8961	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	542	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	378	Alkaline picrate no deproteinization
	mg/dl	4.27	
	µmol/l	384	Enzymatic UV method
	mg/dl	4.34	
	µmol/l	378	Creatinine PAP method
	mg/dl	4.27	
	µmol/l	374	Jaffe rate blanked
	mg/dl	4.23	
	µmol/l	380	IDMS traceable
	mg/dl	4.29	
gamma-GT	U/l	196	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION EXL® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
gamma-GT	U/l	226	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.7	Oxygen electrode
	mg/dl	283	
Iron	µmol/l	36.7	Colorimetric with ppt.
	µg/dl	205	
	µmol/l	36.7	Colorimetric without ppt.
	µg/dl	205	
Lactate	mmol/l	5.28	Colorimetric Lactate Oxidase
	mg/dl	47.6	
	mmol/l	5.40	UV LDH
	mg/dl	48.7	
LD (LDH)	U/l	348	Siemens Dimension L-P Non IFCC 37°C
	U/l	349	L->P IFCC 37°C
Lipase	U/l	247	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.84	Xylidyl Blue
	mg/dl	4.47	
	mmol/l	1.79	Methylthymol blue
	mg/dl	4.35	
Phosphate Inorganic	mmol/l	2.26	Phosphomolybdate enzymatic
	mg/dl	7.01	
	mmol/l	2.28	Phosphomolybdate UV
	mg/dl	7.07	
Potassium	mmol/l	6.15	ISE method - indirect
Protein Total	g/l	46.9	Biuret reaction end point
	g/dl	4.69	
Sodium	mmol/l	161	ISE method - indirect
TIBC	µmol/l	35.4	Removal of excess free iron
	µg/dl	198	
	µmol/l	33.9	FE+UIBC(saturation with iron)
	µg/dl	190	
	µmol/l	34.9	Direct Colorimetric
	µg/dl	195	
Triglycerides	mmol/l	2.84	Lipase/GPO-PAP no correction
	mg/dl	251	
	mmol/l	2.82	L/G Kinase EP. no correction
	mg/dl	250	
	mmol/l	2.81	Lipase/Glycerol Dehydrogenase
	mg/dl	249	
Urea	mmol/l	21.8	Urease end point
	mg/dl	131	
	mmol/l	22.3	Urease kinetic
	mg/dl	134	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION EXL® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Urea	mmol/l	22.3	BUN
	mg/dl	62.6	
Uric Acid (Urate)	mmol/l	0.563	Uricase catalase 340nm
	mg/dl	9.46	
	mmol/l	0.556	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	
	mmol/l	0.560	Spectrophotometric at 280-290
	mg/dl	9.41	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	27.5	Bromocresol Green
	g/dl	2.75	
	g/l	28.3	Bromocresol Purple
	g/dl	2.83	
Alkaline Phosphatase	U/l	330	Siemens Dimension AMP buffer 37°C
	U/l	332	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	166	Tris buffer with P5P 37°C
	U/l	167	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	342	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	189	Tris buffer with P5P 37°C
	U/l	186	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.9	Enzymatic
Bilirubin Direct	µmol/l	26.0	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.52	
Bilirubin Total	µmol/l	93.7	Diazo with Sulphanilic Acid
	mg/dl	5.48	
Calcium	mmol/l	3.07	Cresolphthalein complexone
	mg/dl	12.3	
	mmol/l	3.00	Arsenazo III
	mg/dl	12.0	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	6.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	268	
	mmol/l	7.01	Dimension-Siemens reagents
	mg/dl	271	
Cholinesterase	U/l	9196	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	541	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	379	Alkaline picrate no deproteinization
	mg/dl	4.28	
	µmol/l	376	Enzymatic UV method
	mg/dl	4.25	
	µmol/l	379	Creatinine PAP method
	mg/dl	4.28	
	µmol/l	381	Jaffe rate blanked
	mg/dl	4.31	
	µmol/l	379	IDMS traceable
	mg/dl	4.28	
gamma-GT	U/l	203	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	222	Siemens Dimension (non IFCC) 37°C

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Glucose	mmol/l	15.3	Glucose dehydrogenase
	mg/dl	275	
	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	36.9	Colorimetric with ppt.
	µg/dl	206	
	µmol/l	37.0	Colorimetric without ppt.
	µg/dl	207	
Lactate	mmol/l	5.45	UV LDH
	mg/dl	49.1	
LD (LDH)	U/l	348	L->P 37°C
	U/l	349	Siemens Dimension L-P Non IFCC 37°C
	U/l	347	L->P IFCC 37°C
Lipase	U/l	249	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.20	Spectrophotometric
	mg/dl	1.53	
Magnesium	mmol/l	1.79	Methylthymol blue
	mg/dl	4.35	
Phosphate Inorganic	mmol/l	2.27	Phosphomolybdate enzymatic
	mg/dl	7.04	
	mmol/l	2.25	Phosphomolybdate UV
	mg/dl	6.98	
Potassium	mmol/l	6.09	ISE method - indirect
Protein Total	g/l	46.9	Biuret reaction end point
	g/dl	4.69	
Sodium	mmol/l	159	ISE method - indirect
TIBC	µmol/l	35.3	Removal of excess free iron
	µg/dl	197	
	µmol/l	34.5	FE+UIBC(saturation with iron)
	µg/dl	193	
	µmol/l	35.3	Direct Colorimetric
	µg/dl	197	
Triglycerides	mmol/l	2.82	Lipase/GPO-PAP no correction
	mg/dl	250	
	mmol/l	2.77	L/G Kinase EP. no correction
	mg/dl	245	
	mmol/l	2.77	Lipase/Glycerol Dehydrogenase
	mg/dl	245	
Urea	mmol/l	22.0	Urease kinetic
	mg/dl	132	
	mmol/l	22.0	BUN
	mg/dl	61.7	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.563	Uricase catalase 340nm
	mg/dl	9.46	
	mmol/l	0.565	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.49	
	mmol/l	0.550	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	
	mmol/l	0.560	Spectrophotometric at 280-290
	mg/dl	9.41	

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CALIBRATION SERUM LEVEL 3 (CAL3)

SIEMENS DIMENSION Vista® Lot. No. 1225UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2023-10-28

Analyte	unit	Target	methods
Albumin	g/l	28.5	Bromocresol Purple
	g/dl	2.85	
Alkaline Phosphatase	U/l	341	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	167	Tris buffer with P5P 37°C
Amylase Total	U/l	339	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	192	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	27.6	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.61	
Bilirubin Total	µmol/l	93.4	Diazo with Sulphanilic Acid
	mg/dl	5.46	
Calcium	mmol/l	3.16	Cresolphthalein complexone
	mg/dl	12.7	
Chloride	mmol/l	118	ISE indirect
Cholesterol	mmol/l	6.87	Cholesterol Oxidase - Abell Kendall
	mg/dl	265	
CK Total	U/l	555	CK-NAC (IFCC) 37°C
gamma-GT	U/l	225	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	273	
HDL - Cholesterol	mmol/l	2.77	Direct HDL PEGME
	mg/dl	107	
Iron	µmol/l	37.4	Colorimetric without ppt.
	µg/dl	209	
LD (LDH)	U/l	364	L->P IFCC 37°C
Magnesium	mmol/l	1.86	Methylthymol blue
	mg/dl	4.52	
Phosphate Inorganic	mmol/l	2.22	Phosphomolybdate UV
	mg/dl	6.88	
Potassium	mmol/l	6.06	ISE method - indirect
Protein Total	g/l	47.5	Biuret reaction end point
	g/dl	4.75	
Sodium	mmol/l	159	ISE method - indirect
Triglycerides	mmol/l	2.99	Lipase/GPO-PAP no correction
	mg/dl	265	
Urea	mmol/l	21.9	Urease kinetic
	mg/dl	132	
	mmol/l	21.9	BUN
	mg/dl	61.5	
Uric Acid (Urate)	mmol/l	0.558	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	

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