CALIBRATION SERUM LEVEL 3 (CAL 3)

CAT. NO. CAL 2351 **LOT NO.** 1029UE
SIZE: 20 x 5ml **EXPIRY:** 2020-12-28

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 levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum be allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 1 day at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
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.

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 Mean of all Instruments 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.

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Abbott Alinity/ Architect c/ci Systems® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	29.4	Bromocresol Green
	g/dl	2.94	
	g/l	27.7	Bromocresol Purple
	g/dl	2.77	
Alkaline Phosphatase	U/l	318	AMP optimised to IFCC 37°C
	U/l	312	AMP optimised to NVKC/SFBC 37°C
	U/l	313	AMP non-optimised 37°C
	U/l	300	Colorimetric 37°C
ALT (GPT)	U/l	142	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	258	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	323	Abbott Architect Non-IFCC Cal. 37°C
	U/l	357	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	139	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.0	Enzymatic
Bile Acids	µmol/l	44.6	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.6	Diazo with Sulphanilic Acid
	mg/dl	1.61	
	µmol/l	27.7	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	
Bilirubin Total	µmol/l	84.2	Diazo with Dichloroaniline (DCA)
	mg/dl	4.93	
	µmol/l	85.0	Diazo with Sulphanilic Acid
	mg/dl	4.97	
	µmol/l	83.2	Diazonium ion
	mg/dl	4.86	
Calcium	mmol/l	3.25	Arsenazo III
	mg/dl	13.0	
Chloride	mmol/l	116	ISE indirect
Cholesterol	mmol/l	7.16	Cholesterol Oxidase
	mg/dl	276	
Cholinesterase	U/l	6142	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	537	CK-NAC serum start (DGKC) 37°C
	U/l	530	CK-NAC (IFCC) 37°C
Copper	µmol/l	20.8	Colorimetric
	µg/dl	132	
Creatinine	µmol/l	384	Alkaline picrate no deproteinization
	mg/dl	4.34	
	µmol/l	371	Enzymatic UV method
	mg/dl	4.19	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Abbott Alinity/ Architect c/ci Systems® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Creatinine	µmol/l	371	Creatinine PAP method
	mg/dl	4.19	
	µmol/l	380	Jaffe rate blanked
	mg/dl	4.30	
	µmol/l	388	IDMS traceable
	mg/dl	4.39	
gamma-GT	U/l	174	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	171	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.8	Glucose oxidase
	mg/dl	285	
Iron	µmol/l	38.7	Colorimetric with ppt.
	µg/dl	216	
	µmol/l	38.1	Colorimetric without ppt.
	µg/dl	213	
Lactate	mmol/l	5.87	Colorimetric Lactate Oxidase
	mg/dl	52.9	
LD (LDH)	U/l	364	L->P 37°C
	U/l	358	L->P IFCC 37°C
Lipase	U/l	57	Other Colorimetric 37°C
Lithium	mmol/l	2.02	Spectrophotometric
	mg/dl	1.40	
Magnesium	mmol/l	1.78	Arsenazo III
	mg/dl	4.33	
	mmol/l	1.75	Xylidyl Blue
	mg/dl	4.25	
	mmol/l	1.77	Enzymatic
	mg/dl	4.30	
Phosphate Inorganic	mmol/l	2.33	Phosphomolybdate enzymatic
	mg/dl	7.22	
	mmol/l	2.36	Phosphomolybdate UV
	mg/dl	7.32	
Potassium	mmol/l	6.19	ISE method - indirect
Protein Total	g/l	46.7	Biuret reaction end point
	g/dl	4.67	
	g/l	46.7	Biuret reaction kinetic
	g/dl	4.67	
Sodium	mmol/l	162	ISE method - indirect
TIBC	µmol/l	46.9	FE+UIBC(saturation with iron)
	µg/dl	262	
	µmol/l	41.9	Calculated from Transferrin
	µg/dl	234	

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Abbott Alinity/ Architect c/ci Systems® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
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	
	mmol/l	2.91	Lipase/Glycerol Dehydrogenase
	mg/dl	258	
UIBC	µmol/l	8.68	Direct Colorimetric
	µg/dl	48.5	
Urea	mmol/l	20.2	Urease end point
	mg/dl	121	
	mmol/l	20.4	Urease kinetic
	mg/dl	123	
	mmol/l	20.4	BUN
	mg/dl	57.3	
Uric Acid (Urate)	mmol/l	0.566	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	
	mmol/l	0.567	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	
	mmol/l	0.564	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.48	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

ABX Pentra 400® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	29.1	Bromocresol Green
	g/dl	2.91	
Alkaline Phosphatase	U/l	324	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	164	Tris buffer without P5P 37°C
AST (GOT)	U/l	156	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	24.8	Diazo with Dichloroaniline (DCA)
	mg/dl	1.45	
Bilirubin Total	µmol/l	88.1	Diazo with Dichloroaniline (DCA)
	mg/dl	5.16	
Calcium	mmol/l	3.39	Arsenazo III
	mg/dl	13.6	
Chloride	mmol/l	116	ISE indirect
Cholesterol	mmol/l	7.46	Cholesterol Oxidase
	mg/dl	288	
Creatinine	µmol/l	361	Alkaline picrate no deproteinization
	mg/dl	4.08	
	µmol/l	382	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.32	
gamma-GT	U/l	185	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	185	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	Glucose oxidase
	mg/dl	281	
Iron	µmol/l	35.2	Colorimetric without ppt.
	µg/dl	197	
Magnesium	mmol/l	1.72	Xylidyl Blue
	mg/dl	4.18	
Phosphate Inorganic	mmol/l	2.65	Phosphomolybdate UV
	mg/dl	8.22	
Potassium	mmol/l	6.00	ISE method - indirect
Protein Total	g/l	48.8	Biuret reaction end point
	g/dl	4.88	
Sodium	mmol/l	160	ISE method - indirect
Triglycerides	mmol/l	3.04	Lipase/GPO-PAP no correction
	mg/dl	269	
Urea	mmol/l	18.5	Urease end point
	mg/dl	111	
	mmol/l	19.6	Urease kinetic
	mg/dl	118	
	mmol/l	19.6	BUN
	mg/dl	55.0	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

ABX Pentra 400® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.575	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.66	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
a-HBDH	U/l	407	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	27.7	Bromocresol Green
	g/dl	2.77	
	g/l	28.0	Bromocresol Purple
	g/dl	2.80	
Alkaline Phosphatase	U/l	387	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	149	Tris buffer without P5P 37°C
	U/l	146	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	295	pNP Maltotrioside substrates 37°C
	U/l	295	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	292	Beckman Coulter - blocked pNPG7 37°C
	U/l	285	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	151	Tris buffer without P5P 37°C
	U/l	151	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	17.9	Enzymatic
Bilirubin Direct	µmol/l	22.1	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.29	
Bilirubin Total	µmol/l	84.5	Diazo with Dichloroaniline (DCA)
	mg/dl	4.94	
	µmol/l	94.1	Diazo with Sulphanilic Acid
	mg/dl	5.51	
	µmol/l	83.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.90	
	µmol/l	84.1	DPD (Beckman AU)
	mg/dl	4.92	
Calcium	mmol/l	3.21	Cresolphthalein complexone
	mg/dl	12.9	
	mmol/l	3.23	Arsenazo III
	mg/dl	12.9	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.34	Cholesterol Oxidase
	mg/dl	283	
Cholinesterase	U/l	5076	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	548	CK-NAC serum start (DGKC) 37°C
	U/l	559	CK-NAC substrate start (DGKC) 37°C
	U/l	532	CK-NAC (IFCC) 37°C
	U/l	532	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	25.4	Colorimetric
	µg/dl	161	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Creatinine	µmol/l	349	Alkaline picrate no deproteinization
	mg/dl	3.94	
	µmol/l	375	Enzymatic UV method
	mg/dl	4.23	
	µmol/l	374	Creatinine PAP method
	mg/dl	4.22	
	µmol/l	347	Jaffe rate blanked
	mg/dl	3.92	
	µmol/l	369	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.17	
	µmol/l	363	IDMS traceable
	mg/dl	4.10	
D-3-Hydroxybutyrate	mmol/l	1.15	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	182	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	149	Gamma glutamyl-4-nitroanilide 37°C
	U/l	177	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	182	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	30	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.8	Hexokinase
	mg/dl	285	
	mmol/l	15.8	Glucose oxidase
	mg/dl	285	
Iron	µmol/l	38.7	Colorimetric with ppt.
	µg/dl	216	
	µmol/l	38.2	Colorimetric without ppt.
	µg/dl	214	
Lactate	mmol/l	5.42	Colorimetric Lactate Oxidase
	mg/dl	48.8	
LD (LDH)	U/l	357	L->P 37°C
	U/l	797	P->L Scandinavian & Dutch 37°C
	U/l	366	L->P IFCC 37°C
	U/l	355	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	60	Other Colorimetric 37°C
	U/l	50	Roche Colorimetric 37°C
	U/l	77	Randox Colorimetric 37°C
Lithium	mmol/l	2.04	Spectrophotometric
	mg/dl	1.42	
Magnesium	mmol/l	1.82	Xylidyl Blue
	mg/dl	4.42	
Phosphate Inorganic	mmol/l	2.41	Phosphomolybdate UV
	mg/dl	7.47	
Potassium	mmol/l	6.15	ISE method - indirect
Protein Total	g/l	46.0	Biuret reaction end point
	g/dl	4.60	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman Coulter AU Series® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Protein Total	g/l	46.1	Biuret reaction kinetic
	g/dl	4.61	
Sodium	mmol/l	161	ISE method - indirect
TIBC	µmol/l	48.1	FE+UIBC(saturation with iron)
	µg/dl	269	
Triglycerides	mmol/l	2.97	Lipase/GPO-PAP no correction
	mg/dl	263	
	mmol/l	2.97	L/G Kinase EP. no correction
	mg/dl	263	
Urea	mmol/l	20.0	Urease end point
	mg/dl	120	
	mmol/l	20.1	Urease kinetic
	mg/dl	121	
	mmol/l	20.1	BUN
	mg/dl	56.4	
Uric Acid (Urate)	mmol/l	0.587	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.86	
	mmol/l	0.585	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.83	
	mmol/l	0.582	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.78	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman CX4/5/7/9/LX20® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.5	Bromocresol Green
	g/dl	3.05	
	g/l	29.0	Bromocresol Purple
	g/dl	2.90	
Alkaline Phosphatase	U/l	350	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	137	Tris buffer without P5P 37°C
Amylase Total	U/l	298	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	141	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.5	Differential rate pH change
Bilirubin Direct	µmol/l	15.0	Diazo with Sulphanilic Acid
	mg/dl	0.878	
Bilirubin Total	µmol/l	82.9	Diazo with Sulphanilic Acid
	mg/dl	4.85	
Calcium	mmol/l	3.12	Ion selective electrode
	mg/dl	12.5	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.23	Cholesterol Oxidase
	mg/dl	279	
CK Total	U/l	527	Monothioglycerol 37°C
Creatinine	µmol/l	372	Alkaline picrate no deproteinization
	mg/dl	4.20	
	µmol/l	371	IDMS traceable
	mg/dl	4.19	
gamma-GT	U/l	147	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.2	Glucose oxidase
	mg/dl	274	
Iron	µmol/l	37.7	Colorimetric without ppt.
	µg/dl	211	
Lactate	mmol/l	5.14	Colorimetric Lactate Oxidase
	mg/dl	46.3	
LD (LDH)	U/l	302	L->P 37°C
Lipase	U/l	68	Other Colorimetric 37°C
Magnesium	mmol/l	1.74	Calmagite
	mg/dl	4.23	
Phosphate Inorganic	mmol/l	2.46	Phosphomolybdate UV
	mg/dl	7.63	
Potassium	mmol/l	6.16	ISE method - indirect

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman CX4/5/7/9/LX20® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Protein Total	g/l	45.9	Biuret reaction CX4/5/7
	g/dl	4.59	
	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
	g/l	44.2	Biuret reaction kinetic
	g/dl	4.42	
Sodium	mmol/l	161	ISE method - indirect
Triglycerides	mmol/l	3.11	L/G Kinase EP. no correction
	mg/dl	275	
Urea	mmol/l	20.5	Urease kinetic
	mg/dl	123	
	mmol/l	20.5	BUN
	mg/dl	57.5	
Uric Acid (Urate)	mmol/l	0.545	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman DxC600/800® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.5	Bromocresol Green
	g/dl	3.05	
	g/l	29.0	Bromocresol Purple
	g/dl	2.90	
Alkaline Phosphatase	U/l	335	AMP optimised to IFCC 37°C
	U/l	339	AMP non-optimised 37°C
ALT (GPT)	U/l	137	Tris buffer without P5P 37°C
	U/l	132	Tris buffer SCE 37°C
Amylase Total	U/l	299	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	140	Tris buffer without P5P 37°C
	U/l	139	Tris buffer SCE 37°C
Bicarbonate	mmol/l	17.4	Differential rate pH change
	mmol/l	18.0	Ion selective electrode
Bilirubin Direct	µmol/l	14.8	Diazo with Sulphanilic Acid
	mg/dl	0.866	
Bilirubin Total	µmol/l	82.9	Diazo with Sulphanilic Acid
	mg/dl	4.85	
Calcium	mmol/l	3.12	Ion selective electrode
	mg/dl	12.5	
Chloride	mmol/l	115	ISE indirect
Cholesterol	mmol/l	7.22	Cholesterol Oxidase
	mg/dl	279	
Cholinesterase	U/l	5470	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	524	Monothioglycerol 37°C
Creatinine	µmol/l	371	Alkaline picrate no deproteinization
	mg/dl	4.19	
	µmol/l	368	Jaffe rate blanked
	mg/dl	4.16	
	µmol/l	371	IDMS traceable
	mg/dl	4.19	
gamma-GT	U/l	146	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.2	Hexokinase
	mg/dl	274	
	mmol/l	15.1	Oxygen electrode
	mg/dl	272	
	mmol/l	15.2	Glucose oxidase
	mg/dl	274	
Iron	µmol/l	38.6	Colorimetric without ppt.
	µg/dl	216	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

Beckman DxC600/800® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Lactate	mmol/l	5.14	Colorimetric Lactate Oxidase
	mg/dl	46.3	
LD (LDH)	U/l	299	L->P 37°C
	U/l	948	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	287	L->P IFCC 37°C
Lipase	U/l	70	Other Colorimetric 37°C
Lithium	mmol/l	2.03	Spectrophotometric
	mg/dl	1.41	
Magnesium	mmol/l	1.75	Calmagite
	mg/dl	4.25	
Phosphate Inorganic	mmol/l	2.44	Phosphomolybdate UV
	mg/dl	7.56	
Potassium	mmol/l	6.15	ISE method - indirect
Protein Total	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
	g/l	44.1	Biuret reaction kinetic
	g/dl	4.41	
Sodium	mmol/l	160	ISE method - indirect
Triglycerides	mmol/l	3.10	Lipase/GPO-PAP no correction
	mg/dl	274	
	mmol/l	3.11	L/G Kinase EP. no correction
	mg/dl	275	
Urea	mmol/l	20.6	Urease end point
	mg/dl	124	
	mmol/l	20.4	Urease kinetic
	mg/dl	123	
	mmol/l	20.4	BUN
	mg/dl	57.3	
Uric Acid (Urate)	mmol/l	0.544	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A15 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.5	Bromocresol Green
	g/dl	3.15	
Alkaline Phosphatase	U/l	338	AMP optimised to IFCC 37°C
	U/l	263	AMP optimised to IFCC 30°C
	U/l	216	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	162	Tris buffer without P5P 37°C
	U/l	120	Tris buffer without P5P 30°C
	U/l	91	Tris buffer without P5P 25°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 Direct	µmol/l	27.7	Diazo with Sulphanilic Acid
	mg/dl	1.62	
Bilirubin Total	µmol/l	89.2	Diazo with Sulphanilic Acid
	mg/dl	5.22	
Cholesterol	mmol/l	7.53	Cholesterol Oxidase
	mg/dl	291	
Glucose	mmol/l	16.3	Glucose oxidase
	mg/dl	293	
Protein Total	g/l	49.3	Biuret reaction end point
	g/dl	4.93	
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
Urea	mmol/l	19.1	Urease kinetic
	mg/dl	115	
	mmol/l	19.1	BUN
	mg/dl	53.6	
Uric Acid (Urate)	mmol/l	0.544	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.14	
	mmol/l	0.586	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.84	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

BIOSYSTEMS A25 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.9	Bromocresol Green
	g/dl	3.19	
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
AST (GOT)	U/l	155	Tris buffer without P5P 37°C
	U/l	105	Tris buffer without P5P 30°C
	U/l	74	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.2	Diazo with Sulphanilic Acid
	mg/dl	4.93	
Calcium	mmol/l	3.20	Arsenazo III
	mg/dl	12.8	
Cholesterol	mmol/l	7.48	Cholesterol Oxidase
	mg/dl	289	
Glucose	mmol/l	15.7	Glucose oxidase
	mg/dl	283	
Protein Total	g/l	45.2	Biuret reaction end point
	g/dl	4.52	
Triglycerides	mmol/l	3.01	Lipase/GPO-PAP no correction
	mg/dl	266	
Urea	mmol/l	18.5	Urease kinetic
	mg/dl	111	
	mmol/l	18.5	BUN
	mg/dl	51.9	
Uric Acid (Urate)	mmol/l	0.580	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.74	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Biotechnica/Wiener BT and CB Series Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	28.3	Bromocresol Green
	g/dl	2.83	
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
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 Total	µmol/l	77.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.53	
Calcium	mmol/l	3.09	Arsenazo III
	mg/dl	12.4	
Cholesterol	mmol/l	7.19	Cholesterol Oxidase
	mg/dl	278	
CK Total	U/l	507	CK-NAC (IFCC) 37°C
	U/l	317	CK-NAC (IFCC) 30°C
	U/l	215	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	339	Alkaline picrate no deproteinization
	mg/dl	3.83	
	µmol/l	359	Creatinine PAP method
	mg/dl	4.05	
gamma-GT	U/l	183	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	144	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	113	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	Glucose oxidase
	mg/dl	276	
Phosphate Inorganic	mmol/l	2.40	Phosphomolybdate UV
	mg/dl	7.44	
Protein Total	g/l	48.3	Biuret reaction end point
	g/dl	4.83	
Triglycerides	mmol/l	2.75	Lipase/GPO-PAP no correction
	mg/dl	243	
Urea	mmol/l	18.9	Urease kinetic
	mg/dl	114	
	mmol/l	18.9	BUN
	mg/dl	53.0	
Uric Acid (Urate)	mmol/l	0.561	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.1	Bromocresol Green
	g/dl	3.11	
	g/l	30.1	Bromocresol Purple
	g/dl	3.01	
	g/l	28.0	Turbidimetric Assays
	g/dl	2.80	
Alkaline Phosphatase	U/l	289	Roche Integra AMP buffer 37°C
	U/l	225	Roche Integra AMP buffer 30°C
	U/l	185	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	137	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	267	Immunoinhibition EPS substrate 37°C
	U/l	269	Roche EPS Liquid 37°C
Amylase Total	U/l	287	Roche Integra 2-chloro-pNPG7 37°C
	U/l	287	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.6	Colorimetric
	mmol/l	17.4	Enzymatic
Bilirubin Direct	µmol/l	27.5	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	
	µmol/l	27.5	Diazo with Sulphanilic Acid
	mg/dl	1.61	
	µmol/l	26.9	Roche JG factored
	mg/dl	1.58	
Bilirubin Total	µmol/l	74.9	Diazo with Dichloroaniline (DCA)
	mg/dl	4.38	
	µmol/l	75.4	Diazo with Sulphanilic Acid
	mg/dl	4.41	
	µmol/l	75.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.40	
	µmol/l	74.8	Diazonium ion
	mg/dl	4.38	
Calcium	mmol/l	3.23	Cresolphthalein complexone
	mg/dl	12.9	
	mmol/l	3.25	NM-BAPTA
	mg/dl	13.0	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Chloride	mmol/l	117	ISE indirect
Cholesterol	mmol/l	7.05	Cholesterol Oxidase
	mg/dl	272	
CK Total	U/l	492	CK-NAC (IFCC) 37°C
	U/l	308	CK-NAC (IFCC) 30°C
	U/l	209	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	353	Alkaline picrate with deproteinization
	mg/dl	3.99	
	µmol/l	365	Alkaline picrate no deproteinization
	mg/dl	4.13	
	µmol/l	364	Enzymatic UV method
	mg/dl	4.11	
	µmol/l	363	Roche Creatinine Plus
	mg/dl	4.10	
	µmol/l	390	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.41	
	µmol/l	379	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.28	
gamma-GT	U/l	164	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	180	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	Hexokinase
	mg/dl	285	
Iron	µmol/l	38.2	Colorimetric with ppt.
	µg/dl	214	
	µmol/l	37.8	Colorimetric without ppt.
	µg/dl	211	
Lactate	mmol/l	5.70	Colorimetric Lactate Oxidase
	mg/dl	51.4	
LD (LDH)	U/l	678	P->L German methods 37°C
	U/l	490	P->L German methods 30°C
	U/l	344	P->L German methods 25°C
	U/l	378	L->P IFCC 37°C
	U/l	273	L->P IFCC 30°C
	U/l	192	L->P IFCC 25°C
Lipase	U/l	54	Roche Colorimetric 37°C
Lithium	mmol/l	2.00	Ion selective electrode
	mg/dl	1.39	
Magnesium	mmol/l	1.80	Chlorphosphonazo III
	mg/dl	4.37	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

COBAS INTEGRA® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Phosphate Inorganic	mmol/l	2.47	Phosphomolybdate enzymatic
	mg/dl	7.66	
	mmol/l	2.46	Phosphomolybdate UV
	mg/dl	7.63	
Potassium	mmol/l	6.21	ISE method - indirect
Protein Total	g/l	43.6	Biuret reaction end point
	g/dl	4.36	
	g/l	43.7	Biuret reaction kinetic
	g/dl	4.37	
Sodium	mmol/l	161	ISE method - indirect
TIBC	µmol/l	51.4	FE+UIBC(saturation with iron)
	µg/dl	287	
Triglycerides	mmol/l	2.98	Lipase/GPO-PAP no correction
	mg/dl	264	
	mmol/l	3.00	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	266	
	mmol/l	3.00	Lipase/Glycerol Dehydrogenase
	mg/dl	266	
Urea	mmol/l	19.4	Urease kinetic
	mg/dl	117	
	mmol/l	19.4	BUN
	mg/dl	54.4	
Uric Acid (Urate)	mmol/l	0.569	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.56	
	mmol/l	0.566	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	
	mmol/l	0.568	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Elitech/Vitalab Selectra Series Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
Alkaline Phosphatase	U/l	465	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	153	Tris buffer without P5P 37°C
AST (GOT)	U/l	145	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	84.7	Diazo with Sulphanilic Acid
	mg/dl	4.95	
Calcium	mmol/l	3.25	Arsenazo III
	mg/dl	13.0	
Cholesterol	mmol/l	7.56	Cholesterol Oxidase
	mg/dl	292	
CK Total	U/l	510	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	364	Alkaline picrate no deproteinization
	mg/dl	4.11	
Glucose	mmol/l	16.0	Glucose oxidase
	mg/dl	288	
Protein Total	g/l	48.2	Biuret reaction end point
	g/dl	4.82	
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
Urea	mmol/l	19.2	Urease kinetic
	mg/dl	115	
	mmol/l	19.2	BUN
	mg/dl	53.9	
Uric Acid (Urate)	mmol/l	0.593	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.96	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

HITACHI SERIES® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Acid Phosphatase (Total)	U/l	23.5	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	30.4	Bromocresol Green
	g/dl	3.04	
Alkaline Phosphatase	U/l	266	Roche Integra AMP buffer 37°C
	U/l	207	Roche Integra AMP buffer 30°C
	U/l	170	Roche Integra AMP buffer 25°C
	U/l	329	Randox AMP 37°C
	U/l	256	Randox AMP 30°C
	U/l	210	Randox AMP 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 Pancreatic	U/l	288	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	277	Roche liquid stable pNPG7 37°C
	U/l	318	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	140	Tris buffer without P5P 37°C
	U/l	95	Tris buffer without P5P 30°C
	U/l	67	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.3	Enzymatic
Bile Acids	µmol/l	44.5	5th Generation Colorimetric
Bilirubin Total	µmol/l	79.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.63	
Calcium	mmol/l	3.25	Cresolphthalein complexone
	mg/dl	13.0	
	mmol/l	3.26	NM-BAPTA
	mg/dl	13.1	
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.11	Cholesterol Oxidase
	mg/dl	274	
CK Total	U/l	492	CK-NAC (IFCC) 37°C
	U/l	308	CK-NAC (IFCC) 30°C
	U/l	209	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	361	Roche Creatinine Plus
	mg/dl	4.08	
	µmol/l	398	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	
D-3-Hydroxybutyrate	mmol/l	1.20	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	159	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	98	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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CALIBRATION SERUM LEVEL 3 (CAL 3)

HITACHI SERIES® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
gamma-GT	U/l	182	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	185	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	146	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	114	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.1	Glucose oxidase
	mg/dl	272	
Iron	µmol/l	37.7	Colorimetric without ppt.
	µg/dl	211	
Magnesium	mmol/l	1.80	Xylidyl Blue
	mg/dl	4.37	
Phosphate Inorganic	mmol/l	2.37	Phosphomolybdate UV
	mg/dl	7.35	
Potassium	mmol/l	6.26	ISE method - indirect
Protein Total	g/l	46.7	Biuret reaction end point
	g/dl	4.67	
Sodium	mmol/l	163	ISE method - indirect
Triglycerides	mmol/l	3.00	Lipase/GPO-PAP no correction
	mg/dl	266	
Urea	mmol/l	20.3	Urease kinetic
	mg/dl	122	
	mmol/l	20.3	BUN
	mg/dl	57.0	
Uric Acid (Urate)	mmol/l	0.542	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.11	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	28.8	Bromocresol Green
	g/dl	2.88	
Alkaline Phosphatase	U/l	330	AMP optimised to IFCC 37°C
	U/l	257	AMP optimised to IFCC 30°C
	U/l	211	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	152	Tris buffer without P5P 37°C
	U/l	112	Tris buffer without P5P 30°C
	U/l	86	Tris buffer without P5P 25°C
AST (GOT)	U/l	160	Tris buffer without P5P 37°C
	U/l	108	Tris buffer without P5P 30°C
	U/l	76	Tris buffer without P5P 25°C
Bile Acids	µmol/l	47.0	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	25.1	Diazo with Sulphanilic Acid
	mg/dl	1.47	
Bilirubin Total	µmol/l	78.1	Diazo with Sulphanilic Acid
	mg/dl	4.57	
	µmol/l	77.0	Nitrobenzenediazonium salt
	mg/dl	4.51	
Calcium	mmol/l	3.39	Arsenazo III
	mg/dl	13.6	
Chloride	mmol/l	117	ISE direct
Cholesterol	mmol/l	7.04	Cholesterol Oxidase
	mg/dl	272	
CK Total	U/l	518	CK-NAC (IFCC) 37°C
	U/l	324	CK-NAC (IFCC) 30°C
	U/l	220	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	357	Alkaline picrate no deproteinization
	mg/dl	4.03	
	µmol/l	362	Enzymatic UV method
	mg/dl	4.10	
	µmol/l	381	Creatinine PAP method
	mg/dl	4.30	
gamma-GT	U/l	174	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.3	Glucose oxidase
	mg/dl	276	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Konelab 20/30/60®/Thermo Scientific Indiko Plus® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Iron	µmol/l	38.3	Colorimetric without ppt.
	µg/dl	214	
LD (LDH)	U/l	730	P->L SFBC 37°C
	U/l	527	P->L SFBC 30°C
	U/l	370	P->L SFBC 25°C
Magnesium	mmol/l	1.65	Xylidyl Blue
	mg/dl	4.01	
Phosphate Inorganic	mmol/l	2.43	Phosphomolybdate UV
	mg/dl	7.53	
Potassium	mmol/l	6.03	ISE method - direct
Protein Total	g/l	47.2	Biuret reaction end point
	g/dl	4.72	
Sodium	mmol/l	157	ISE method - direct
Triglycerides	mmol/l	2.97	Lipase/GPO-PAP no correction
	mg/dl	263	
Urea	mmol/l	18.3	Urease kinetic
	mg/dl	110	
	mmol/l	18.3	BUN
	mg/dl	51.4	
Uric Acid (Urate)	mmol/l	0.589	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.90	
	mmol/l	0.561	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	
	mmol/l	0.578	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.71	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
a-HBDH	U/l	406	Oxobutyrate < 10 mmol/l 37°C
	U/l	307	Oxobutyrate < 10 mmol/l 30°C
	U/l	230	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	23.5	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	30.0	Bromocresol Green
	g/dl	3.00	
	g/l	28.2	Bromocresol Purple
	g/dl	2.82	
	g/l	27.5	Turbidimetric Assays
	g/dl	2.75	
Alkaline Phosphatase	U/l	484	Diethanolamine buffer DEA 37°C
	U/l	377	Diethanolamine buffer DEA 30°C
	U/l	309	Diethanolamine buffer DEA 25°C
	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
	U/l	320	AMP non-optimised 37°C
	U/l	249	AMP non-optimised 30°C
	U/l	204	AMP non-optimised 25°C
ALT (GPT)	U/l	149	Tris buffer with P5P 37°C
	U/l	110	Tris buffer with P5P 30°C
	U/l	84	Tris buffer with P5P 25°C
	U/l	141	Tris buffer without P5P 37°C
	U/l	104	Tris buffer without P5P 30°C
	U/l	79	Tris buffer without P5P 25°C
	U/l	133	Tris buffer SCE 37°C
	U/l	98	Tris buffer SCE 30°C
	U/l	75	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	258	Immunoinhibition EPS substrate 37°C
	U/l	255	Roche EPS Liquid 37°C
	U/l	288	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	292	pNP Maltotrioside substrates 37°C
	U/l	294	Siemens - blocked pNPG7 37°C
	U/l	233	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	318	Randox Liquid Ethylidene pNPG7 37°C
	U/l	278	BM/Roche Colorimetric pNPG7 37°C
	U/l	293	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	343	Siemens - maltopenta/hexaoside 37°C
	U/l	269	Saccharogenic 37°C

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Amylase Total	U/l	284	Roche Integra 2-chloro-pNPG7 37°C
	U/l	283	Other Roche 2-chloro-pNPG7 37°C
	U/l	278	Roche liquid stable pNPG7 37°C
	U/l	352	Siemens 2-chloro-pNPG3 37°C
	U/l	291	Beckman Coulter - blocked pNPG7 37°C
	U/l	299	Beckman Synchron AMY7 37°C
	U/l	323	Abbott Architect Non-IFCC Cal. 37°C
	U/l	357	Abbott Architect IFCC Cal. 37°C
	U/l	285	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	181	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	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
	U/l	139	Tris buffer SCE 37°C
	U/l	94	Tris buffer SCE 30°C
	U/l	66	Tris buffer SCE 25°C
Bicarbonate	mmol/l	17.5	Colorimetric
	mmol/l	17.4	Differential rate pH change
	mmol/l	17.5	Enzymatic
	mmol/l	18.5	Ion selective electrode
Bile Acids	µmol/l	45.0	4th Generation Colorimetric
	µmol/l	44.5	5th Generation Colorimetric
Bilirubin Direct	µmol/l	25.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	
	µmol/l	27.5	Diazo with Sulphanilic Acid
	mg/dl	1.61	
	µmol/l	27.3	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	
	µmol/l	28.4	Oxidation to Biliverdin/Vanadate
	mg/dl	1.66	
Bilirubin Total	µmol/l	87.8	Diazo with Dichloroaniline (DCA)
	mg/dl	5.14	
	µmol/l	81.9	Diazo with Sulphanilic Acid
	mg/dl	4.79	
	µmol/l	77.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.51	
	µmol/l	79.2	Diazonium ion
	mg/dl	4.63	
	µmol/l	92.4	Oxidation to Biliverdin/Vanadate
	mg/dl	5.41	
Calcium	mmol/l	3.24	Cresolphthalein complexone
	mg/dl	13.0	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Calcium	mmol/l	3.12	Ion selective electrode
	mg/dl	12.5	
	mmol/l	3.24	Arsenazo III
	mg/dl	13.0	
	mmol/l	3.26	NM-BAPTA
	mg/dl	13.1	
Chloride	mmol/l	114	Colorimetric
	mmol/l	115	ISE indirect
	mmol/l	116	ISE direct
Cholesterol	mmol/l	7.15	Cholesterol Oxidase
	mg/dl	276	
Cholinesterase	U/l	5347	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	525	CK-NAC serum start (DGKC) 37°C
	U/l	329	CK-NAC serum start (DGKC) 30°C
	U/l	223	CK-NAC serum start (DGKC) 25°C
	U/l	515	CK-NAC substrate start (DGKC) 37°C
	U/l	322	CK-NAC substrate start (DGKC) 30°C
	U/l	219	CK-NAC substrate start (DGKC) 25°C
	U/l	504	CK-NAC (IFCC) 37°C
	U/l	316	CK-NAC (IFCC) 30°C
	U/l	214	CK-NAC (IFCC) 25°C
	U/l	524	Monothioglycerol 37°C
	U/l	328	Monothioglycerol 30°C
	U/l	223	Monothioglycerol 25°C
Copper	µmol/l	26.9	Atomic absorption
	µg/dl	171	
	µmol/l	25.4	Colorimetric
	µg/dl	162	
Creatinine	µmol/l	358	Alkaline picrate with deproteinization
	mg/dl	4.05	
	µmol/l	363	Alkaline picrate no deproteinization
	mg/dl	4.11	
	µmol/l	368	Enzymatic UV method
	mg/dl	4.16	
	µmol/l	370	Creatinine PAP method
	mg/dl	4.18	
	µmol/l	364	Jaffe rate blanked
	mg/dl	4.11	
	µmol/l	397	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.49	
	µmol/l	377	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.26	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Creatinine	µmol/l	368	IDMS traceable
	mg/dl	4.16	
D-3-Hydroxybutyrate	mmol/l	1.15	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	171	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	146	Gamma glutamyl-4-nitroanilide 37°C
	U/l	115	Gamma glutamyl-4-nitroanilide 30°C
	U/l	90	Gamma glutamyl-4-nitroanilide 25°C
	U/l	180	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	185	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	146	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	114	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	27	Triethanolamine buffer 50 mmol 37°C
	U/l	21	Triethanolamine buffer 50 mmol 30°C
	U/l	17	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.5	Glucose dehydrogenase
	mg/dl	279	
	mmol/l	15.7	Hexokinase
	mg/dl	283	
	mmol/l	15.2	Oxygen electrode
	mg/dl	274	
	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	38.1	Colorimetric with ppt.
	µg/dl	213	
	µmol/l	37.7	Colorimetric without ppt.
	µg/dl	211	
Lactate	mmol/l	5.59	Colorimetric Lactate Oxidase
	mg/dl	50.4	
	mmol/l	5.54	Enzymatic Electrode
	mg/dl	49.9	
	mmol/l	5.36	UV LDH
	mg/dl	48.3	
LAP	U/l	15	NAGEL 37°C
LD (LDH)	U/l	329	L->P 37°C
	U/l	238	L->P 30°C
	U/l	167	L->P 25°C
	U/l	803	P->L Scandinavian & Dutch 37°C
	U/l	580	P->L Scandinavian & Dutch 30°C
	U/l	407	P->L Scandinavian & Dutch 25°C

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
LD (LDH)	U/l	696	P->L German methods 37°C
	U/l	503	P->L German methods 30°C
	U/l	353	P->L German methods 25°C
	U/l	693	P->L SFBC 37°C
	U/l	500	P->L SFBC 30°C
	U/l	351	P->L SFBC 25°C
	U/l	365	L->P IFCC 37°C
	U/l	264	L->P IFCC 30°C
	U/l	185	L->P IFCC 25°C
Lipase	U/l	53	Roche Colorimetric 37°C
	U/l	80	Randox Colorimetric 37°C
Lithium	mmol/l	2.11	Ion selective electrode
	mg/dl	1.47	
	mmol/l	2.04	Spectrophotometric
	mg/dl	1.42	
	mmol/l	2.04	Randox Colorimetric
	mg/dl	1.42	
Magnesium	mmol/l	1.78	Arsenazo III
	mg/dl	4.33	
	mmol/l	1.75	Calmagite
	mg/dl	4.25	
	mmol/l	1.80	Xylidyl Blue
	mg/dl	4.37	
	mmol/l	1.77	Methylthymol blue
	mg/dl	4.30	
	mmol/l	1.80	Chlorphosphonazo III
	mg/dl	4.37	
	mmol/l	1.77	Enzymatic
	mg/dl	4.30	
Osmolality	mOsm/kg	353	Calculated
	mOsm/kg	385	Freezing point depression
Phosphate Inorganic	mmol/l	2.39	Phosphomolybdate enzymatic
	mg/dl	7.41	
	mmol/l	2.40	Phosphomolybdate UV
	mg/dl	7.44	
Potassium	mmol/l	6.05	Enzymatic
	mmol/l	6.14	ISE method - direct
	mmol/l	6.22	ISE method - indirect
Protein Total	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
	g/l	45.0	Biuret reaction kinetic
	g/dl	4.50	
Sodium	mmol/l	158	Enzymatic

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MEAN OF ALL INSTRUMENTS Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Sodium	mmol/l	160	ISE method - direct
	mmol/l	162	ISE method - indirect
TIBC	µmol/l	45.3	Removal of excess free iron
	µg/dl	253	
	µmol/l	48.6	FE+UIBC(saturation with iron)
	µg/dl	272	
	µmol/l	47.0	Direct Colorimetric
	µg/dl	263	
	µmol/l	42.8	Calculated from Transferrin
	µg/dl	239	
	µmol/l	50.2	Randox Direct
	µg/dl	281	
Triglycerides	mmol/l	2.95	Lipase/GPO-PAP no correction
	mg/dl	261	
	mmol/l	2.97	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	263	
	mmol/l	3.00	L/G Kinase EP. no correction
	mg/dl	266	
	mmol/l	2.94	Lipase/Glycerol Dehydrogenase
	mg/dl	260	
Urea	mmol/l	19.9	Urease end point
	mg/dl	120	
	mmol/l	19.9	Urease kinetic
	mg/dl	120	
	mmol/l	19.9	BUN
	mg/dl	55.9	
Uric Acid (Urate)	mmol/l	0.542	Uricase catalase 340nm
	mg/dl	9.11	
	mmol/l	0.565	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.49	
	mmol/l	0.561	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	
	mmol/l	0.558	Spectrophotometric at 280-290
	mg/dl	9.37	
	mmol/l	0.556	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	
Zinc	µmol/l	37.2	Colorimetric with deproteinisation
	µg/dl	243	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
Alkaline Phosphatase	U/l	462	Diethanolamine buffer DEA 37°C
	U/l	360	Diethanolamine buffer DEA 30°C
	U/l	295	Diethanolamine buffer DEA 25°C
	U/l	342	AMP optimised to IFCC 37°C
	U/l	266	AMP optimised to IFCC 30°C
	U/l	219	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	146	Tris buffer without P5P 37°C
	U/l	108	Tris buffer without P5P 30°C
	U/l	82	Tris buffer without P5P 25°C
AST (GOT)	U/l	150	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	71	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	26.3	Diazo with Sulphanilic Acid
	mg/dl	1.54	
Bilirubin Total	µmol/l	83.9	Diazo with Sulphanilic Acid
	mg/dl	4.91	
	µmol/l	86.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.04	
	µmol/l	86.6	Oxidation to Biliverdin/Vanadate
	mg/dl	5.06	
Calcium	mmol/l	3.21	Cresolphthalein complexone
	mg/dl	12.9	
	mmol/l	3.24	Arsenazo III
	mg/dl	13.0	
Chloride	mmol/l	117	ISE indirect
Cholesterol	mmol/l	7.32	Cholesterol Oxidase
	mg/dl	283	
Cholinesterase	U/l	5541	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	513	CK-NAC (IFCC) 37°C
	U/l	321	CK-NAC (IFCC) 30°C
	U/l	218	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	348	Alkaline picrate no deproteinization
	mg/dl	3.93	
	µmol/l	386	Jaffe rate blanked
	mg/dl	4.36	
gamma-GT	U/l	161	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	127	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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CALIBRATION SERUM LEVEL 3 (CAL 3)

MINDRAY BS-200/300/400 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
gamma-GT	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	15.7	Hexokinase
	mg/dl	282	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	36.6	Colorimetric without ppt.
	µg/dl	205	
LD (LDH)	U/l	750	P->L German methods 37°C
	U/l	542	P->L German methods 30°C
	U/l	380	P->L German methods 25°C
	U/l	682	P->L SFBC 37°C
	U/l	492	P->L SFBC 30°C
	U/l	346	P->L SFBC 25°C
	U/l	358	L->P IFCC 37°C
	U/l	258	L->P IFCC 30°C
	U/l	182	L->P IFCC 25°C
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	6.26	ISE method - indirect
Protein Total	g/l	48.7	Biuret reaction end point
	g/dl	4.87	
Sodium	mmol/l	161	ISE method - indirect
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
Urea	mmol/l	20.0	Urease kinetic
	mg/dl	120	
	mmol/l	20.0	BUN
	mg/dl	56.1	
Uric Acid (Urate)	mmol/l	0.585	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.83	
	mmol/l	0.564	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	
	mmol/l	0.561	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.42	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas 6000 c501 e601 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.9	Bromocresol Green
	g/dl	3.09	
	g/l	27.4	Bromocresol Purple
	g/dl	2.74	
	g/l	26.9	Turbidimetric Assays
	g/dl	2.69	
Alkaline Phosphatase	U/l	284	Roche Integra AMP buffer 37°C
	U/l	221	Roche Integra AMP buffer 30°C
	U/l	181	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	138	Tris buffer without P5P 37°C
	U/l	102	Tris buffer without P5P 30°C
	U/l	78	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	251	Roche EPS Liquid 37°C
Amylase Total	U/l	277	BM/Roche Colorimetric pNPG7 37°C
	U/l	275	Roche Integra 2-chloro-pNPG7 37°C
	U/l	275	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.6	Colorimetric
	mmol/l	17.4	Enzymatic
Bile Acids	µmol/l	44.3	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	26.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	
	µmol/l	26.8	Diazo with Sulphanilic Acid
	mg/dl	1.57	
	µmol/l	26.8	Roche JG factored
	mg/dl	1.57	
	µmol/l	25.8	Oxidation to Biliverdin/Vanadate
	mg/dl	1.51	
Bilirubin Total	µmol/l	77.9	Diazo with Sulphanilic Acid
	mg/dl	4.56	
	µmol/l	77.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.54	
	µmol/l	78.1	Diazonium ion
	mg/dl	4.57	
Calcium	mmol/l	3.26	Cresolphthalein complexone
	mg/dl	13.1	
	mmol/l	3.26	NM-BAPTA
	mg/dl	13.1	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas 6000 c501 e601 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Chloride	mmol/l	112	ISE indirect
Cholesterol	mmol/l	7.01	Cholesterol Oxidase
	mg/dl	271	
Cholinesterase	U/l	5283	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	498	CK-NAC substrate start (DGKC) 37°C
	U/l	312	CK-NAC substrate start (DGKC) 30°C
	U/l	212	CK-NAC substrate start (DGKC) 25°C
	U/l	489	CK-NAC (IFCC) 37°C
	U/l	306	CK-NAC (IFCC) 30°C
	U/l	208	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	371	Alkaline picrate no deproteinization
	mg/dl	4.19	
	µmol/l	375	Enzymatic UV method
	mg/dl	4.24	
	µmol/l	376	Roche Creatinine Plus
	mg/dl	4.24	
	µmol/l	379	Jaffe rate blanked
	mg/dl	4.28	
	µmol/l	398	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	
	µmol/l	385	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.35	
D-3-Hydroxybutyrate	mmol/l	1.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	159	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	98	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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
GLDH	U/l	26	Triethanolamine buffer 50 mmol 37°C
	U/l	20	Triethanolamine buffer 50 mmol 30°C
	U/l	16	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.7	Glucose dehydrogenase
	mg/dl	282	
	mmol/l	15.6	Hexokinase
	mg/dl	281	
	mmol/l	15.5	Glucose oxidase
	mg/dl	279	
Iron	µmol/l	37.1	Colorimetric with ppt.
	µg/dl	207	
	µmol/l	37.4	Colorimetric without ppt.
	µg/dl	209	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas 6000 c501 e601 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Lactate	mmol/l	5.58	Colorimetric Lactate Oxidase
	mg/dl	50.3	
LD (LDH)	U/l	687	P->L German methods 37°C
	U/l	496	P->L German methods 30°C
	U/l	348	P->L German methods 25°C
	U/l	690	P->L SFBC 37°C
	U/l	498	P->L SFBC 30°C
	U/l	350	P->L SFBC 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	52	Roche Colorimetric 37°C
Lithium	mmol/l	2.06	Spectrophotometric
	mg/dl	1.43	
Magnesium	mmol/l	1.80	Xylidyl Blue
	mg/dl	4.37	
	mmol/l	1.79	Chlorphosphonazo III
	mg/dl	4.35	
Osmolality	mOsm/kg	355	Calculated
Phosphate Inorganic	mmol/l	2.40	Phosphomolybdate enzymatic
	mg/dl	7.44	
	mmol/l	2.39	Phosphomolybdate UV
	mg/dl	7.41	
Potassium	mmol/l	6.26	ISE method - indirect
Protein Total	g/l	46.0	Biuret reaction end point
	g/dl	4.60	
	g/l	45.8	Biuret reaction kinetic
	g/dl	4.58	
Sodium	mmol/l	163	ISE method - indirect
TIBC	µmol/l	48.6	FE+UIBC(saturation with iron)
	µg/dl	272	
	µmol/l	44.2	Calculated from Transferrin
	µg/dl	247	
Triglycerides	mmol/l	2.94	Lipase/GPO-PAP no correction
	mg/dl	260	
	mmol/l	2.93	L/G Kinase EP. no correction
	mg/dl	259	
Urea	mmol/l	19.9	Urease end point
	mg/dl	120	
	mmol/l	19.8	Urease kinetic
	mg/dl	119	
	mmol/l	19.8	BUN
	mg/dl	55.6	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas 6000 c501 e601 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Uric Acid (Urate)	mmol/l	0.547	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.19	
	mmol/l	0.547	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.19	
	mmol/l	0.546	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C111® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.8	Bromocresol Green
	g/dl	3.08	
Alkaline Phosphatase	U/l	286	Roche Integra AMP buffer 37°C
	U/l	223	Roche Integra AMP buffer 30°C
	U/l	183	Roche Integra AMP buffer 25°C
	U/l	268	AMP optimised to IFCC 37°C
	U/l	209	AMP optimised to IFCC 30°C
	U/l	171	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	136	Tris buffer without P5P 37°C
	U/l	101	Tris buffer without P5P 30°C
	U/l	77	Tris buffer without P5P 25°C
Amylase Total	U/l	284	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.2	Enzymatic
Bilirubin Direct	µmol/l	28.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	
	µmol/l	27.9	Diazo with Sulphanilic Acid
	mg/dl	1.63	
	µmol/l	27.8	Roche JG factored
	mg/dl	1.63	
Bilirubin Total	µmol/l	73.9	Diazo with Sulphanilic Acid
	mg/dl	4.33	
	µmol/l	75.3	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.40	
	µmol/l	77.7	Diazonium ion
	mg/dl	4.54	
Calcium	mmol/l	3.14	Cresolphthalein complexone
	mg/dl	12.6	
	mmol/l	3.27	NM-BAPTA
	mg/dl	13.1	
Chloride	mmol/l	118	ISE indirect
Cholesterol	mmol/l	7.18	Cholesterol Oxidase
	mg/dl	277	
CK Total	U/l	481	CK-NAC (IFCC) 37°C
	U/l	301	CK-NAC (IFCC) 30°C
	U/l	204	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	363	Alkaline picrate no deproteinization
	mg/dl	4.10	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C111® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Creatinine	µmol/l	365	Roche Creatinine Plus
	mg/dl	4.12	
	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	
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	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	15.8	Hexokinase
	mg/dl	285	
LD (LDH)	U/l	372	L->P IFCC 37°C
	U/l	269	L->P IFCC 30°C
	U/l	189	L->P IFCC 25°C
Magnesium	mmol/l	1.79	Chlorphosphonazo III
	mg/dl	4.35	
Phosphate Inorganic	mmol/l	2.45	Phosphomolybdate UV
	mg/dl	7.60	
Potassium	mmol/l	6.16	ISE method - indirect
Protein Total	g/l	48.0	Biuret reaction end point
	g/dl	4.80	
Sodium	mmol/l	160	ISE method - indirect
Triglycerides	mmol/l	2.97	Lipase/GPO-PAP no correction
	mg/dl	263	
Urea	mmol/l	19.4	Urease kinetic
	mg/dl	117	
	mmol/l	19.4	BUN
	mg/dl	54.4	
Uric Acid (Urate)	mmol/l	0.558	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	
	mmol/l	0.555	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	
	mmol/l	0.575	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.66	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	31.0	Bromocresol Green
	g/dl	3.10	
	g/l	27.5	Bromocresol Purple
	g/dl	2.75	
Alkaline Phosphatase	U/l	278	Roche Integra AMP buffer 37°C
	U/l	217	Roche Integra AMP buffer 30°C
	U/l	178	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	138	Tris buffer without P5P 37°C
	U/l	102	Tris buffer without P5P 30°C
	U/l	78	Tris buffer without P5P 25°C
Amylase Total	U/l	279	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.0	Enzymatic
Bilirubin Direct	µmol/l	26.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	
	µmol/l	24.8	Diazo with Sulphanilic Acid
	mg/dl	1.45	
	µmol/l	26.3	Roche JG factored
	mg/dl	1.54	
Bilirubin Total	µmol/l	77.0	Diazo with Sulphanilic Acid
	mg/dl	4.51	
	µmol/l	77.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.56	
	µmol/l	78.7	Diazonium ion
	mg/dl	4.60	
Calcium	mmol/l	3.27	Cresolphthalein complexone
	mg/dl	13.1	
	mmol/l	3.27	NM-BAPTA
	mg/dl	13.1	
Chloride	mmol/l	113	ISE indirect
Cholesterol	mmol/l	7.08	Cholesterol Oxidase
	mg/dl	273	
CK Total	U/l	497	CK-NAC (IFCC) 37°C
	U/l	311	CK-NAC (IFCC) 30°C
	U/l	211	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	377	Alkaline picrate no deproteinization
	mg/dl	4.26	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Creatinine	µmol/l	379	Roche Creatinine Plus
	mg/dl	4.29	
	µmol/l	403	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.55	
gamma-GT	U/l	162	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	100	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	187	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	282	
	mmol/l	15.9	Glucose oxidase
	mg/dl	287	
Iron	µmol/l	37.3	Colorimetric without ppt.
	µg/dl	209	
Lactate	mmol/l	5.63	Colorimetric Lactate Oxidase
	mg/dl	50.7	
LD (LDH)	U/l	682	P->L German methods 37°C
	U/l	492	P->L German methods 30°C
	U/l	346	P->L German methods 25°C
	U/l	365	L->P IFCC 37°C
	U/l	264	L->P IFCC 30°C
	U/l	185	L->P IFCC 25°C
Lipase	U/l	52	Roche Colorimetric 37°C
Magnesium	mmol/l	1.81	Xylidyl Blue
	mg/dl	4.40	
	mmol/l	1.81	Chlorphosphonazo III
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.41	Phosphomolybdate UV
	mg/dl	7.47	
Potassium	mmol/l	6.30	ISE method - indirect
Protein Total	g/l	46.1	Biuret reaction end point
	g/dl	4.61	
Sodium	mmol/l	164	ISE method - indirect
TIBC	µmol/l	50.2	FE+UIBC(saturation with iron)
	µg/dl	281	
Triglycerides	mmol/l	2.96	Lipase/GPO-PAP no correction
	mg/dl	262	
UIBC	µmol/l	12.6	Direct Colorimetric
	µg/dl	70.5	
Urea	mmol/l	19.9	Urease kinetic
	mg/dl	120	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas C311® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Urea	mmol/l	19.9	BUN
	mg/dl	55.9	
Uric Acid (Urate)	mmol/l	0.551	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	
	mmol/l	0.555	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	
	mmol/l	0.557	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.8	Bromocresol Green
	g/dl	3.08	
	g/l	26.9	Turbidimetric Assays
	g/dl	2.69	
Alkaline Phosphatase	U/l	264	Roche Integra AMP buffer 37°C
	U/l	206	Roche Integra AMP buffer 30°C
	U/l	169	Roche Integra AMP buffer 25°C
	U/l	256	AMP optimised to IFCC 37°C
	U/l	199	AMP optimised to IFCC 30°C
	U/l	164	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	138	Tris buffer without P5P 37°C
	U/l	102	Tris buffer without P5P 30°C
	U/l	78	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	256	Roche EPS Liquid 37°C
Amylase Total	U/l	277	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	Tris buffer without P5P 37°C
	U/l	96	Tris buffer without P5P 30°C
	U/l	68	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.2	Enzymatic
Bile Acids	µmol/l	42.9	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.7	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	
	µmol/l	26.8	Roche JG factored
	mg/dl	1.57	
Bilirubin Total	µmol/l	79.2	Diazo with Dichloroaniline (DCA)
	mg/dl	4.63	
	µmol/l	75.6	Diazo with Sulphanilic Acid
	mg/dl	4.42	
	µmol/l	76.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.48	
	µmol/l	77.2	Diazonium ion
	mg/dl	4.52	
Calcium	mmol/l	3.24	Cresolphthalein complexone
	mg/dl	13.0	
	mmol/l	3.22	Arsenazo III
	mg/dl	12.9	
	mmol/l	3.23	NM-BAPTA
	mg/dl	12.9	
Chloride	mmol/l	114	ISE indirect

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CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Cholesterol	mmol/l	7.00	Cholesterol Oxidase
	mg/dl	270	
Cholinesterase	U/l	5139	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	487	CK-NAC (IFCC) 37°C
	U/l	305	CK-NAC (IFCC) 30°C
	U/l	207	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	378	Roche Creatinine Plus
	mg/dl	4.27	
	µmol/l	370	Jaffe rate blanked
	mg/dl	4.18	
	µmol/l	398	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	
gamma-GT	U/l	153	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	180	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	Hexokinase
	mg/dl	279	
Iron	µmol/l	36.5	Colorimetric without ppt.
	µg/dl	204	
Lactate	mmol/l	5.51	Colorimetric Lactate Oxidase
	mg/dl	49.6	
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
Lipase	U/l	53	Roche Colorimetric 37°C
Lithium	mmol/l	2.02	Spectrophotometric
	mg/dl	1.40	
Magnesium	mmol/l	1.78	Xylidyl Blue
	mg/dl	4.33	
	mmol/l	1.80	Chlorphosphonazo III
	mg/dl	4.37	
Phosphate Inorganic	mmol/l	2.36	Phosphomolybdate UV
	mg/dl	7.32	
Potassium	mmol/l	6.29	ISE method - indirect
Protein Total	g/l	45.7	Biuret reaction end point
	g/dl	4.57	
Sodium	mmol/l	164	ISE method - indirect
TIBC	µmol/l	50.3	FE+UIBC(saturation with iron)
	µg/dl	281	
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

Roche Cobas c701 / c702 / c711 Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Triglycerides	mmol/l	2.91	L/G Kinase EP. no correction
	mg/dl	258	
Urea	mmol/l	19.5	Urease kinetic
	mg/dl	117	
	mmol/l	19.5	BUN
	mg/dl	54.7	
Uric Acid (Urate)	mmol/l	0.548	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	
	mmol/l	0.541	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.09	
	mmol/l	0.543	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.12	

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

RX SERIES® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.6	Bromocresol Green
	g/dl	3.06	
Alkaline Phosphatase	U/l	522	Diethanolamine buffer DEA 37°C
	U/l	329	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	148	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	288	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	318	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	155	Tris buffer without P5P 37°C
Bile Acids	µmol/l	44.5	5th Generation Colorimetric
Bilirubin Direct	µmol/l	24.9	Diazo with Sulphanilic Acid
	mg/dl	1.46	
	µmol/l	28.0	Oxidation to Biliverdin/Vanadate
	mg/dl	1.64	
Bilirubin Total	µmol/l	81.9	Diazo with Sulphanilic Acid
	mg/dl	4.79	
	µmol/l	83.4	Oxidation to Biliverdin/Vanadate
	mg/dl	4.88	
Calcium	mmol/l	3.29	Arsenazo III
	mg/dl	13.2	
Cholesterol	mmol/l	7.62	Cholesterol Oxidase
	mg/dl	294	
CK Total	U/l	523	CK-NAC substrate start (DGKC) 37°C
	U/l	554	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	326	Alkaline picrate no deproteinization
	mg/dl	3.68	
	µmol/l	371	Enzymatic UV method
	mg/dl	4.19	
gamma-GT	U/l	185	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.9	Hexokinase
	mg/dl	287	
	mmol/l	16.3	Glucose oxidase
	mg/dl	294	
Iron	µmol/l	39.6	Colorimetric without ppt.
	µg/dl	221	
Lactate	mmol/l	5.40	Colorimetric Lactate Oxidase
	mg/dl	48.7	
LD (LDH)	U/l	751	P->L German methods 37°C
	U/l	357	L->P IFCC 37°C
Lipase	U/l	80	Randox Colorimetric 37°C

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RANDOX

CALIBRATION SERUM LEVEL 3 (CAL 3)

RX SERIES® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Lithium	mmol/l	2.04	Colorimetric
	mg/dl	1.42	
Magnesium	mmol/l	1.79	Xylidyl Blue
	mg/dl	4.35	
Phosphate Inorganic	mmol/l	2.47	Phosphomolybdate UV
	mg/dl	7.66	
Potassium	mmol/l	6.05	Enzymatic
Protein Total	g/l	48.4	Biuret reaction end point
	g/dl	4.84	
Sodium	mmol/l	158	Enzymatic
TIBC	µmol/l	50.2	Direct Colorimetric
	µg/dl	281	
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
Urea	mmol/l	20.4	Urease kinetic
	mg/dl	123	
	mmol/l	20.4	BUN
	mg/dl	57.3	
Uric Acid (Urate)	mmol/l	0.592	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.95	
	mmol/l	0.589	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.90	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	29.1	Bromocresol Green
	g/dl	2.91	
	g/l	27.0	Bromocresol Purple
	g/dl	2.70	
Alkaline Phosphatase	U/l	293	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	259	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	295	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	153	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.0	Enzymatic
Bile Acids	µmol/l	47.3	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.2	Oxidation to Biliverdin/Vanadate
	mg/dl	1.65	
Bilirubin Total	µmol/l	92.8	Oxidation to Biliverdin/Vanadate
	mg/dl	5.43	
Calcium	mmol/l	3.32	Cresolphthalein complexone
	mg/dl	13.3	
	mmol/l	3.15	Arsenazo III
	mg/dl	12.6	
Chloride	mmol/l	117	ISE indirect
Cholesterol	mmol/l	7.20	Cholesterol Oxidase
	mg/dl	278	
Cholinesterase	U/l	5825	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	519	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	364	Alkaline picrate no deproteinization
	mg/dl	4.11	
	µmol/l	357	Enzymatic UV method
	mg/dl	4.04	
	µmol/l	362	Jaffe rate blanked
	mg/dl	4.09	
	µmol/l	385	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.35	
gamma-GT	U/l	181	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.1	Hexokinase
	mg/dl	271	
	mmol/l	15.2	Glucose oxidase
	mg/dl	274	
Iron	µmol/l	38.0	Colorimetric without ppt.
	µg/dl	212	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Lactate	mmol/l	5.50	Colorimetric Lactate Oxidase
	mg/dl	49.6	
LD (LDH)	U/l	707	P->L German methods 37°C
	U/l	370	L->P IFCC 37°C
Lipase	U/l	77	Other Colorimetric 37°C
Lithium	mmol/l	2.04	Spectrophotometric
	mg/dl	1.42	
Magnesium	mmol/l	1.81	Xylidyl Blue
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.42	Phosphomolybdate UV
	mg/dl	7.50	
Potassium	mmol/l	6.29	ISE method - indirect
Protein Total	g/l	46.5	Biuret reaction end point
	g/dl	4.65	
Sodium	mmol/l	163	ISE method - indirect
TIBC	µmol/l	48.0	FE+UIBC(saturation with iron)
	µg/dl	268	
	µmol/l	46.3	Direct Colorimetric
	µg/dl	259	
Triglycerides	mmol/l	3.00	Lipase/GPO-PAP no correction
	mg/dl	266	
Urea	mmol/l	20.2	Urease kinetic
	mg/dl	121	
	mmol/l	20.2	BUN
	mg/dl	56.7	
Uric Acid (Urate)	mmol/l	0.567	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	
	mmol/l	0.577	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.69	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION EXL® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	27.3	Bromocresol Purple
	g/dl	2.73	
Alkaline Phosphatase	U/l	303	Siemens Dimension AMP buffer 37°C
	U/l	304	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	152	Tris buffer with P5P 37°C
	U/l	153	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	353	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	177	Tris buffer with P5P 37°C
	U/l	177	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	15.6	Diazo with Sulphanilic Acid
	mg/dl	0.913	
Bilirubin Total	µmol/l	83.3	Diazo with Sulphanilic Acid
	mg/dl	4.87	
Calcium	mmol/l	3.21	Cresolphthalein complexone
	mg/dl	12.9	
Chloride	mmol/l	116	ISE indirect
Cholesterol	mmol/l	6.73	Dimension-Siemens reagents
	mg/dl	260	
CK Total	U/l	486	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	380	Alkaline picrate no deproteinization
	mg/dl	4.30	
gamma-GT	U/l	185	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	214	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	281	
Iron	µmol/l	35.9	Colorimetric without ppt.
	µg/dl	201	
Lactate	mmol/l	5.65	UV LDH
	mg/dl	50.9	
LD (LDH)	U/l	359	Siemens Dimension L-P Non IFCC 37°C
	U/l	351	L->P IFCC 37°C
Lipase	U/l	237	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.74	Methylthymol blue
	mg/dl	4.23	
Phosphate Inorganic	mmol/l	2.45	Phosphomolybdate UV
	mg/dl	7.60	
Potassium	mmol/l	6.22	ISE method - indirect
Protein Total	g/l	47.3	Biuret reaction end point
	g/dl	4.73	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION EXL® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Sodium	mmol/l	162	ISE method - indirect
TIBC	µmol/l	45.9	FE+UIBC(saturation with iron)
	µg/dl	257	
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
	mmol/l	2.89	L/G Kinase EP. no correction
	mg/dl	256	
Urea	mmol/l	20.2	Urease kinetic
	mg/dl	121	
	mmol/l	20.2	BUN
	mg/dl	56.7	
Uric Acid (Urate)	mmol/l	0.562	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.44	
	mmol/l	0.559	Spectrophotometric at 280-290
	mg/dl	9.39	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	27.5	Bromocresol Purple
	g/dl	2.75	
Alkaline Phosphatase	U/l	301	Siemens Dimension AMP buffer 37°C
	U/l	294	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	153	Tris buffer with P5P 37°C
	U/l	151	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	351	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	174	Tris buffer with P5P 37°C
	U/l	177	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	15.5	Diazo with Sulphanilic Acid
	mg/dl	0.907	
Bilirubin Total	µmol/l	81.7	Diazo with Sulphanilic Acid
	mg/dl	4.78	
Calcium	mmol/l	3.22	Cresolphthalein complexone
	mg/dl	12.9	
Chloride	mmol/l	117	ISE indirect
Cholesterol	mmol/l	6.80	Dimension-Siemens reagents
	mg/dl	262	
CK Total	U/l	491	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	373	Alkaline picrate no deproteinization
	mg/dl	4.21	
	µmol/l	374	Enzymatic UV method
	mg/dl	4.23	
gamma-GT	U/l	214	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	Hexokinase
	mg/dl	282	
Iron	µmol/l	36.1	Colorimetric without ppt.
	µg/dl	202	
LD (LDH)	U/l	354	Siemens Dimension L-P Non IFCC 37°C
	U/l	348	L->P IFCC 37°C
Lipase	U/l	237	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.81	Methylthymol blue
	mg/dl	4.40	
Phosphate Inorganic	mmol/l	2.41	Phosphomolybdate enzymatic
	mg/dl	7.47	
	mmol/l	2.45	Phosphomolybdate UV
	mg/dl	7.60	
Potassium	mmol/l	6.24	ISE method - indirect
Protein Total	g/l	46.4	Biuret reaction end point
	g/dl	4.64	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

SIEMENS DIMENSION RxL/Max/Xpand® Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Sodium	mmol/l	162	ISE method - indirect
Triglycerides	mmol/l	2.93	Lipase/GPO-PAP no correction
	mg/dl	259	
	mmol/l	2.91	Lipase/Glycerol Dehydrogenase
	mg/dl	258	
Urea	mmol/l	20.5	Urease end point
	mg/dl	123	
	mmol/l	20.0	Urease kinetic
	mg/dl	120	
	mmol/l	20.0	BUN
	mg/dl	56.1	
Uric Acid (Urate)	mmol/l	0.570	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.58	
	mmol/l	0.556	Spectrophotometric at 280-290
	mg/dl	9.34	

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CALIBRATION SERUM LEVEL 3 (CAL 3)

URIT 8000 Series Lot No. 1029UE Cat. No. CAL2351

Size 20 x 5ml Expiry 2020-12-28

Analyte	unit	Target	methods
Albumin	g/l	30.0	Bromocresol Green
	g/dl	3.00	
Alkaline Phosphatase	U/l	467	Diethanolamine buffer DEA 37°C
	U/l	364	Diethanolamine buffer DEA 30°C
	U/l	298	Diethanolamine buffer DEA 25°C
	U/l	335	AMP optimised to IFCC 37°C
	U/l	261	AMP optimised to IFCC 30°C
	U/l	214	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	138	Tris buffer without P5P 37°C
	U/l	102	Tris buffer without P5P 30°C
	U/l	78	Tris buffer without P5P 25°C
AST (GOT)	U/l	139	Tris buffer without P5P 37°C
	U/l	94	Tris buffer without P5P 30°C
	U/l	66	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.4	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	
Bilirubin Total	µmol/l	76.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.50	
Calcium	mmol/l	3.10	Arsenazo III
	mg/dl	12.4	
Cholesterol	mmol/l	7.43	Cholesterol Oxidase
	mg/dl	287	
CK Total	U/l	522	CK-NAC (IFCC) 37°C
	U/l	327	CK-NAC (IFCC) 30°C
	U/l	222	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	365	Alkaline picrate no deproteinization
	mg/dl	4.13	
Glucose	mmol/l	15.4	Glucose oxidase
	mg/dl	278	
Magnesium	mmol/l	1.72	Xylidyl Blue
	mg/dl	4.18	
Protein Total	g/l	49.1	Biuret reaction end point
	g/dl	4.91	
Triglycerides	mmol/l	2.92	Lipase/GPO-PAP no correction
	mg/dl	258	
Uric Acid (Urate)	mmol/l	0.510	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.57	

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