

BioCal (multiparameter calibration serum)

Cat. No. 1-803-0012

4 x 3 ml

Lot: 16G132805

Component	Method	Temp.	Unit	Value
ACP-T (acid phosphatase – total)	1-Naphthylphosphate, kinetic	37°C	U/l	28,8
			µkat/l	0,48
	1-Naphthylphosphate + propanodiol, kinetic	37°C	U/l	28,6
			µkat/l	0,48
ACP-NP (acid phosphatase – non-prostatic)	1-Naphthylphosphate, kinetic	37°C	U/l	13,7
			µkat/l	0,23
	1-Naphthylphosphate + propanodiol, kinetic	37°C	U/l	9,96
			µkat/l	0,17
ACP-P (acid phosphatase – prostatic)	1-Naphthylphosphate, kinetic (calc.: ACP-T – ACP-NP)	37°C	U/l	15,1
			µkat/l	0,25
	1-Naphthylphosphate + propanodiol, kinetic (calc.: ACP-T – ACP-NP)	37°C	U/l	18,6
			µkat/l	0,31
ALAT (alanine aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	97,1
			µkat/l	1,62
Albumin	Bromocresol Green	---	g/dl	3,43
			g/l	34,3
ALP (alkaline phosphatase)	p-Nitrophenylphosphate, AMP buffer (IFCC)	37°C	U/l	282
			µkat/l	4,70
Amylase	CNPG3	37°C	U/l	216
			µkat/l	3,60
	Roche liquid pNPG7	37°C	U/l	183
			µkat/l	3,05
Amylase pancreatic	Roche liquid pNPG7	37°C	U/l	164
			µkat/l	2,73
ASAT (aspartate aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	99,4 ✓
			µkat/l	1,66
Bilirubin direct	Diazo with sulphanilic acid (Jendrassik-Grof)	---	mg/dl	3,41
			µmol/l	58,3
Bilirubin total	Diazo with sulphanilic acid (Jendrassik-Grof)	---	mg/dl	5,11
			µmol/l	87,4
	3,5-Dichlorophenyldiazonium tetrafluoroborate (DPD)	---	mg/dl	4,43
			µmol/l	75,8
Calcium	O-Crezolphtalein (CPC)	---	mg/dl	10,6
			mmol/l	2,65
	Arsenazo III	---	mg/dl	10,5
			mmol/l	2,63
Cholesterol total	CHOD / PAP	---	mg/dl	168
			mmol/l	4,37
Cholesterol HDL	Direct with immunoinhibition	---	mg/dl	56,9
			mmol/l	1,48
Cholesterol LDL	Direct with selective blocking	---	mg/dl	79,4
			mmol/l	2,06

BioCal (multiparameter calibration serum)

Cat. No. 1-803-0012 4 x 3 ml Lot: 16G132805

Component	Method	Temp.	Unit	Value
Cholinesterase	Butyrylthiocholine	37°C	U/l	4661
			µkat/l	77,7
CK (creatine kinase)	IFCC	37°C	U/l	368
			µkat/l	6,13
Creatinine	Jaffe without deproteinization, kinetic	---	mg/dl	3,34
			µmol/l	295
GGT (γ-glutamyltransferase)	γ-Glutamyl-3-carboxy-4-nitroanilide (IFCC)	37°C	U/l	110
			µkat/l	1,83
Glucose	GOD-PAP	---	mg/dl	195
			mmol/l	10,8
α-HBDH	DGKC	37°C	U/l	275
			µkat/l	4,58
Iron	Colorimetric without deproteinization (ferene / ferrozine)	---	µg/dl	187
			µmol/l	33,5
	Colorimetric with chromazurol B (CAB)	---	µg/dl	180
			µmol/l	32,2
LDH	P → L (SCE / DGKC)	37°C	U/l	517
			µkat/l	8,62
	L → P (IFCC)	37°C	U/l	258
			µkat/l	4,30
Lipase	Colorimetric (BioMaxima)	37°C	U/l	80,9
			µkat/l	1,35
	Colorimetric (Roche)	37°C	U/l	102
			µkat/l	1,70
Magnesium	Xylidyl blue	---	mg/dl	2,58
			mmol/l	1,06
Phosphorus inorganic	Phosphomolibdate UV	---	mg/dl	5,34
			mmol/l	1,72
Total protein	Biuret reaction, endpoint	---	g/l	4,71
			g/dl	47,1
Triglycerides	Lipase / GPO - PAP colorimetric	---	mg/dl	136
			mmol/l	1,55
Urea	Urease / GLDH, kinetic	---	mg/dl	94,1
			mmol/l	15,7
Uric acid	Uricase / peroxidase	---	mg/dl	5,48
			µmol/l	326

BioNorm (control serum - normal level)

Cat. No. 1-801-0020

4 x 5 ml

Lot: 17K248733

Expiry date: 2020-04

Component	Method	Temp.	Unit	Value	Range	SD
ACP-T (acid phosphatase - total)	1-Naphthyl Phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	23,3	15,6 - 31,0	3,84
			µkat/l	0,39	0,26 - 0,52	0,06
	1-Naphthyl Phosphate, kinetic	37°C	U/l	23,5	15,7 - 31,3	3,88
			µkat/l	0,39	0,26 - 0,52	0,06
ACP-NP (acid phosphatase - non-prostatic)	1-Naphthyl Phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	12,1	8,11 - 16,1	2,00
			µkat/l	0,20	0,14 - 0,27	0,03
	1-Naphthyl Phosphate, kinetic	37°C	U/l	13,9	9,31 - 18,5	2,29
			µkat/l	0,23	0,16 - 0,31	0,04
ACP-P (acid phosphatase - prostatic)	1-Naphthyl Phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	11,2	7,50 - 14,9	1,85
			µkat/l	0,19	0,13 - 0,25	0,03
	1-Naphthyl Phosphate, kinetic	37°C	U/l	9,60	6,43 - 12,8	1,58
			µkat/l	0,16	0,11 - 0,21	0,03
ALAT (alanine aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	51,1	40,4 - 61,8	5,37
			µkat/l	0,85	0,67 - 1,03	0,09
Albumin	Bromocresol green	---	g/dl	4,63	3,94 - 5,32	0,35
			g/l	46,3	39,4 - 53,2	3,47
ALP (alkaline phosphatase)	p-Nitrophenylphosphate, AMP buffer (IFCC)	37°C	U/l	93,0	73,5 - 113	9,77
			µkat/l	1,55	1,22 - 1,88	0,16
Amylase	CNP3 (Genzyme)	37°C	U/l	80,3	68,3 - 92,3	6,02
			µkat/l	1,34	1,14 - 1,54	0,10
	Roche IFCC liquid	37°C	U/l	80,0	68,0 - 92,0	6,00
			µkat/l	1,33	1,13 - 1,53	0,10
Amylase pancreatic	Roche IFCC liquid	37°C	U/l	39,3	33,4 - 45,2	2,95
			µkat/l	0,66	0,56 - 0,75	0,05
ASAT (aspartate aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	43,4	34,3 - 52,5	4,56
			µkat/l	0,72	0,57 - 0,88	0,08
Bilirubin direct	Diazo with sulphanic acid (Jendrassik-Grof)	---	mg/dl	0,88	0,70 - 1,06	0,09
			µmol/l	15,0	11,9 - 18,2	1,58
Bilirubin total	Diazo with sulphanic acid (Jendrassik-Grof)	---	mg/dl	1,23	0,97 - 1,49	0,13
			µmol/l	21,0	16,6 - 25,4	2,21
	DMSO	---	mg/dl	1,08	0,85 - 1,31	0,11
			µmol/l	18,5	14,6 - 22,3	1,94
	Sodium vanadate oxidation	---	mg/dl	1,07	0,85 - 1,29	0,11
			µmol/l	18,3	14,5 - 22,1	1,92
Calcium	o-Cresoloptaleine (CPC)	---	mg/dl	8,95	7,61 - 10,3	0,67
			mmol/l	2,24	1,90 - 2,57	0,17
	Arsenazo III	---	mg/dl	8,84	7,96 - 9,72	0,44
			mmol/l	2,21	1,99 - 2,43	0,11
Chloride	ISE direct (BM ISE)	---	mg/dl	322	303 - 342	9,67
			mmol/l	90,9	85,4 - 96,4	2,73
	ISE direct (BM ISE NEW)	---	mg/dl	309	290 - 327	9,26
			mmol/l	87,1	81,9 - 92,3	2,61
Cholesterol	CHOD / PAP	---	mg/dl	76,0	64,6 - 87,4	5,70
			mmol/l	1,98	1,68 - 2,27	0,15
Cholesterol HDL	Direct with immunoinhibition	---	mg/dl	25,1	21,3 - 28,9	1,88
			mmol/l	0,65	0,55 - 0,75	0,05
	Precipitation - phosphotungstic acid / MgCl ₂	---	mg/dl	21,5	18,3 - 24,7	1,61
			mmol/l	0,56	0,48 - 0,64	0,04
Cholesterol LDL	Direct with selective blocking	---	mg/dl	59,6	48,9 - 70,3	5,36
			mmol/l	1,55	1,27 - 1,83	0,14
Cholinesterase	Colorimetric / butyrylthiocholine	37°C	U/l	5630	4504 - 6756	563
			µkat/l	93,8	75,1 - 113	9,38
CK (creatine kinase)	IFCC	37°C	U/l	148	121 - 175	13,3
			µkat/l	2,47	2,02 - 2,91	0,22
CK-MB (isoenzyme MB of creatine kinase)	IFCC with immunoinhibition	37°C	U/l	118	89,7 - 146	14,2
			µkat/l	1,97	1,49 - 2,44	0,24

BioNorm (control serum - normal level)

Lot No. 1-801-0020

4 x 5 ml

Lot: 17K248733

Expiry date: 2020-04

Component	Method	Temp.	Unit	Value	Range	SD
Copper	Colorimetric	---	µg/dl	97,1	77,7 - 117	9,71
			µmol/l	15,2	12,2 - 18,3	3,05
Creatinine	Jaffe kinetic	---	mg/dl	1,28	1,05 - 1,51	0,12
			µmol/l	113	92,8 - 134	10,2
	Jaffe kinetic with compensation	---	mg/dl	1,09	0,89 - 1,29	0,10
			µmol/l	96,4	79,0 - 114	8,67
	Enzymatic (PAP)	---	mg/dl	0,95	0,78 - 1,12	0,09
		---	µmol/l	84,0	68,9 - 99,1	7,56
GGT (γ-glutamyltransferase)	γ-Glutamyl-3-carboxy-4-nitroanilide (Szasz 1974)	37°C	U/l	47,2	40,1 - 54,3	3,54
			µkat/l	0,79	0,67 - 0,90	0,06
	IFCC	37°C	U/l	49,8	42,3 - 57,3	3,74
			µkat/l	0,83	0,71 - 0,95	0,06
Glucose	GOD-PAP	---	mg/dl	95,4	81,1 - 110	7,16
			mmol/l	5,29	4,50 - 6,09	0,40
α-HBDH	DGKC	37°C	U/l	148	118 - 178	14,8
			µkat/l	2,47	1,97 - 2,96	0,25
IgA	Immunoturbidimetric	---	mg/dl	153	118 - 188	17,6
			g/l	1,53	1,18 - 1,88	0,18
IgG	Immunoturbidimetric	---	mg/dl	733	601 - 865	66,0
			g/l	7,33	6,01 - 8,65	0,66
IgM	Immunoturbidimetric	---	mg/dl	63,8	45,9 - 81,7	8,93
			g/l	0,64	0,46 - 0,82	0,09
Iron	Colorimetric without deproteinization (ferene/ferrozine)	---	µg/dl	115	94,3 - 136	10,4
			µmol/l	20,6	16,9 - 24,3	1,85
	Colorimetric with chromazurol B (CAB)	---	µg/dl	130	107 - 153	11,7
			µmol/l	23,3	19,1 - 27,5	2,09
LDH	P → L (DGKC)	37°C	U/l	328	279 - 377	24,6
			µkat/l	5,47	4,65 - 6,29	0,41
	L → P (IFCC)	37°C	U/l	165	140 - 190	12,4
			µkat/l	2,75	2,34 - 3,16	0,21
Lipase	Colorimetric	37°C	U/l	39,6	31,7 - 47,5	3,96
			µkat/l	0,66	0,53 - 0,79	0,07
Magnesium	Xylidyl blue	---	mg/dl	1,94	1,71 - 2,17	0,12
			mmol/l	0,80	0,70 - 0,89	0,05
Phosphate inorganic	Phosphomolybdate UV	---	mg/dl	3,59	3,05 - 4,13	0,27
			mmol/l	1,16	0,99 - 1,33	0,09
Potassium	ISE direct (BM ISE)	---	mg/dl	13,7	12,6 - 14,8	0,55
			mmol/l	3,51	3,23 - 3,79	0,14
	ISE direct (BM ISE NEW)	---	mg/dl	13,7	12,6 - 14,8	0,55
			mmol/l	3,51	3,23 - 3,79	0,14
Sodium	ISE direct (BM ISE)	---	mg/dl	276	259 - 293	8,28
			mmol/l	120	113 - 127	3,60
	ISE direct (BM ISE NEW)	---	mg/dl	256	240 - 271	7,67
		---	mmol/l	111	105 - 118	3,34
Total protein	Biuret reaction, endpoint	---	g/dl	5,92	5,21 - 6,63	0,36
			g/l	59,2	52,1 - 66,3	3,55
TIBC	Saturation with iron (Fe + UIBC)	---	µg/dl	297	235 - 359	31,2
			µmol/l	53,2	42,0 - 64,3	5,58
Transferrin	Immunoturbidimetric	---	mg/dl	187	153 - 221	16,8
			g/l	1,87	1,53 - 2,21	0,17
Triglycerides	Lipase / GPO - PAP colorimetric	---	mg/dl	117	98,3 - 136	9,36
			mmol/l	1,33	1,12 - 1,55	0,11
Urea	Urease / GLDH, kinetic	---	mg/dl	38,5	32,7 - 44,3	2,89
			mmol/l	6,43	5,47 - 7,39	0,48
Uric acid	Uricase / POD	---	mg/dl	4,59	3,90 - 5,28	0,34
			µmol/l	273	232 - 314	20,5

BioPath (control serum - elevated level)

Cat. No. 1-802-0020

4 x 5 ml

Lot: 17K248751

Expiry date: 2020-02

Component	Method	Temp.	Unit	Value	Range	SD
ACP-T (acid phosphatase - total)	1-Naphthyl Phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	48,4	32,4 - 64,4	7,99
			µkat/l	0,81	0,54 - 1,07	0,13
	1-Naphthyl Phosphate, kinetic	37°C	U/l	53,8	36,0 - 71,6	8,88
			µkat/l	0,90	0,60 - 1,19	0,15
ACP-NP (acid phosphatase - non-prostatic)	1-Naphthyl Phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	28,4	19,0 - 37,8	4,69
			µkat/l	0,47	0,32 - 0,63	0,08
	1-Naphthyl Phosphate, kinetic	37°C	U/l	34,9	23,4 - 46,4	5,76
			µkat/l	0,58	0,39 - 0,77	0,10
ACP-P (acid phosphatase - prostatic)	Calculation (ACP-T - ACP-NP), 1-naphthyl phosphate + 1,5-pentanodiol, kinetic	37°C	U/l	20,0	13,4 - 26,6	3,30
			µkat/l	0,33	0,22 - 0,44	0,06
	Calculation (ACP-T - ACP-NP), 1-naphthyl phosphate, kinetic	37°C	U/l	18,9	12,7 - 25,1	3,12
			µkat/l	0,32	0,21 - 0,42	0,05
ALAT (alanine aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	147	116 - 178	15,4
			µkat/l	2,45	1,94 - 2,96	0,26
Albumin	Bromocresol green	---	g/dl	2,95	2,51 - 3,39	0,22
			g/l	29,5	25,1 - 33,9	2,21
ALP (alkaline phosphatase)	p-Nitrophenylphosphate, AMP buffer (IFCC)	37°C	U/l	264	209 - 319	27,7
			µkat/l	4,40	3,48 - 5,32	0,46
Amylase	CNP3 (Genzyme)	37°C	U/l	204	173 - 235	15,3
			µkat/l	3,40	2,89 - 3,91	0,26
	Roche IFCC liquid	37°C	U/l	204	173 - 235	15,3
			µkat/l	3,40	2,89 - 3,91	0,26
Amylase pancreatic	Roche IFCC liquid	37°C	U/l	105	89,3 - 121	7,88
			µkat/l	1,75	1,49 - 2,01	0,13
ASAT (aspartate aminotransferase)	IFCC without pyridoxal phosphate	37°C	U/l	140	111 - 169	14,7
			µkat/l	2,33	1,84 - 2,82	0,25
Bilirubin direct	Diazo with sulphanilic acid (Jendrassik-Grof)	---	mg/dl	2,84	2,24 - 3,44	0,30
			µmol/l	48,6	38,4 - 58,8	5,10
Bilirubin total	Diazo with sulphanilic acid (Jendrassik-Grof)	---	mg/dl	4,49	3,55 - 5,43	0,47
			µmol/l	76,8	60,7 - 92,9	8,06
	DMSO	---	mg/dl	3,65	2,88 - 4,42	0,38
			µmol/l	62,4	49,3 - 75,5	6,55
	Sodium vanadate oxidation	---	mg/dl	4,23	3,34 - 5,12	0,44
			µmol/l	72,3	57,1 - 87,5	7,59
Calcium	o-Cresolophtaleine (CPC)	---	mg/dl	15,3	13,0 - 17,6	1,15
			mmol/l	3,83	3,25 - 4,40	0,29
	Arsenazo III	---	mg/dl	13,6	12,2 - 15,0	0,68
Chloride	ISE direct (BM ISE)	---	mg/dl	429	403 - 455	12,9
			mmol/l	121	114 - 128	3,63
	ISE direct (BM ISE NEW)	---	mg/dl	415	390 - 440	12,4
Cholesterol	CHOD / PAP	---	mg/dl	188	160 - 216	14,1
			mmol/l	4,89	4,15 - 5,62	0,37
Cholesterol HDL	Direct with immunoinhibition	---	mg/dl	76,5	65,0 - 88,0	5,74
			mmol/l	1,99	1,69 - 2,29	0,15
	Precipitation - phosphotungstic acid / MgCl ₂	---	mg/dl	64,1	54,5 - 73,7	4,81
			mmol/l	1,67	1,42 - 1,92	0,12
Cholesterol LDL	Direct with selective blocking	---	mg/dl	104	85,3 - 123	9,36
			mmol/l	2,70	2,22 - 3,19	0,24
Cholinesterase	Colorimetric / butyrylthiocholine	37°C	U/l	5137	4110 - 6164	514
			µkat/l	85,6	68,5 - 103	8,56