

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL

Inhalt 20 x 5ml Verw. bis: 2011-12

COBAS INTEGRA		Bereich			
Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	28.0	23.8	32.2	Bromocresol Green
	g/dl	2.80	2.38	3.22	
Alkaline Phosphatase	U/l	91	77	105	AMP optimised to IFCC 37°C
	U/l	71	60	82	AMP optimised to IFCC 30°C
	U/l	58	49	67	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	33	26	40	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	24	19	29	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	19	15	23	Tris buffer no P5P IFCC/SFBC 25°C
Amylase Total	U/l	81	69	93	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	25	20	30	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	17	14	20	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	12	10	14	Tris buffer no P5P IFCC/SFBC 25°C
Bicarbonate	mmol/l	12.2	9.67	14.7	Enzymatic
Bilirubin Direct	µmol/l	9.67	7.64	11.7	Diazo with Sulphanilic Acid
	mg/dl	0.566	0.447	0.685	
Bilirubin Total	µmol/l	15.0	11.9	18.2	Diazo with Sulphanilic Acid
	mg/dl	0.878	0.696	1.06	
Calcium	mmol/l	1.68	1.51	1.85	Cresolphthalein complexone
	mg/dl	6.73	6.05	7.41	
Chloride	mmol/l	92.2	86.7	97.7	ISE indirect
Cholesterol	mmol/l	3.40	2.89	3.91	Cholesterol Oxidase
	mg/dl	131	112	150	
CK Total	U/l	152	125	179	CK-NAC serum start (DGKC) 37°C
	U/l	95	78	112	CK-NAC serum start (DGKC) 30°C
	U/l	65	53	77	CK-NAC serum start (DGKC) 25°C
Creatinine	µmol/l	85.0	69.7	100	Alkaline picrate no deproteinization
	mg/dl	0.960	0.790	1.13	
Gamma-GT	U/l	34	29	39	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	27	23	31	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	21	18	24	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	3.10	2.64	3.57	Hexokinase
	mg/dl	55.9	47.6	64.2	
Iron	µmol/l	23.9	19.6	28.2	Colorimetric without ppt.
	µg/dl	134	110	158	
LD (LDH)	U/l	60	51	69	L->P 37°C
	U/l	43	37	50	L->P 30°C
	U/l	30	26	35	L->P 25°C
Magnesium	mmol/l	0.700	0.616	0.784	Chlorphosphonazo III
	mg/dl	1.70	1.50	1.90	
Phosphate Inorganic	mmol/l	0.970	0.825	1.12	Phosphomolybdate UV
	mg/dl	3.01	2.56	3.46	
Potassium	mmol/l	3.05	2.81	3.29	ISE method - indirect

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COBAS INTEGRA

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Protein Total	g/l	44.3	35.4	53.2	Biuret reaction end point
	g/dl	4.43	3.54	5.32	
Sodium	mmol/l	121	114	128	ISE method - indirect
Triglycerides	mmol/l	0.660	0.554	0.766	Lipase/GPO-PAP no correction
	mg/dl	58.4	49.0	67.8	
Urea	mmol/l	2.65	2.25	3.05	Urease kinetic
	mg/dl	15.9	13.5	18.3	
	mmol/l	2.65	2.25	3.05	BUN
	mg/dl	7.40	6.30	8.50	
Uric Acid (Urate)	mmol/l	0.200	0.170	0.230	Uricase peroxidase with ascorbate oxidase
	mg/dl	3.36	2.86	3.86	

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HITACHI SERIES		Bereich			
Parameter	Einheit	Zielwert	von	bis	Methoden
Alpha-HBDH	U/l	62	49	75	DGKC 37°C
	U/l	47	37	57	DGKC 30°C
	U/l	35	28	42	DGKC 25°C
Acid Phosphatase (non-prostatic)	U/l	4.72	3.16	6.28	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	6.50	4.36	8.65	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	8.48	5.68	11.3	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	4.30	2.88	5.72	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	13.2	8.84	17.6	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	10.8	7.24	14.4	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	28.5	24.2	32.8	Bromocresol Green
	g/dl	2.85	2.42	3.28	
Alkaline Phosphatase	U/l	142	121	163	Diethanolamine buffer DEA 37°C
	U/l	111	94	128	Diethanolamine buffer DEA 30°C
	U/l	91	77	105	Diethanolamine buffer DEA 25°C
	U/l	88	75	101	p-Nitrophenylphosphate AMP 37°C
	U/l	69	58	80	p-Nitrophenylphosphate AMP 30°C
	U/l	56	48	64	p-Nitrophenylphosphate AMP 25°C
ALT (GPT)	U/l	33	26	40	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	24	19	29	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	19	15	23	Tris buffer no P5P IFCC/SFBC 25°C
Amylase Total	U/l	87	74	100	2-chloro-pNPG3 37°C
	U/l	81	69	93	Roche liquid stable pNPG7 37°C
	U/l	91	77	105	Randox EPS Liquid 37°C
AST (GOT)	U/l	25	20	30	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	17	14	20	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	12	10	14	Tris buffer no P5P IFCC/SFBC 25°C
Bicarbonate	mmol/l	11.7	9.28	14.1	Enzymatic
Bile Acids	µmol/l	13.9	11.1	16.7	5th Generation Colorimetric
Bilirubin Direct	µmol/l	15.8	12.5	19.1	Diazo with Sulphanilic Acid
	mg/dl	0.924	0.731	1.12	
Bilirubin Total	µmol/l	17.5	13.8	21.2	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	
	µmol/l	18.2	14.4	22.0	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.842	1.28	
Calcium	mmol/l	1.68	1.51	1.85	Cresolphthalein complexone
	mg/dl	6.73	6.05	7.41	
	mmol/l	1.71	1.54	1.88	Arsenazo III
mg/dl	6.85	6.17	7.53		
Chloride	mmol/l	86.5	81.3	91.7	ISE indirect
Cholesterol	mmol/l	3.30	2.81	3.80	Cholesterol Oxidase
	mg/dl	127	108	146	
CK Total	U/l	154	126	182	CK-NAC serum start (DGKC) 37°C
	U/l	96	79	113	CK-NAC serum start (DGKC) 30°C
	U/l	65	54	76	CK-NAC serum start (DGKC) 25°

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HITACHI SERIES

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
CK Total	U/l	154	126	182	CK-NAC (IFCC) 37°C
	U/l	96	79	113	CK-NAC (IFCC) 30°C
	U/l	65	54	76	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	87.8	72.0	104	Alkaline picrate no deproteinization
	mg/dl	0.992	0.814	1.17	
Gamma-GT	U/l	34	29	39	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	27	23	31	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	21	18	24	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	41	35	47	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	Gamma glutamyl-4-nitroanilide 25°C
Glucose	mmol/l	3.47	2.95	3.99	Glucose oxidase
	mg/dl	62.5	53.2	71.8	
Iron	µmol/l	23.8	19.5	28.1	Colorimetric without ppt.
	µg/dl	133	109	157	
LD (LDH)	U/l	123	105	141	P->L German methods 37°C
	U/l	89	76	102	P->L German methods 30°C
	U/l	62	53	71	P->L German methods 25°C
	U/l	59	50	68	L->P Roche/Randox 37°C
	U/l	43	36	50	L->P Roche/Randox 30°C
	U/l	30	25	35	L->P Roche/Randox 25°C
Lipase	U/l	43	34	52	Randox Colorimetric 37°C
Magnesium	mmol/l	0.670	0.590	0.750	Xylidyl Blue
	mg/dl	1.63	1.43	1.83	
Phosphate Inorganic	mmol/l	0.940	0.799	1.08	Phosphomolybdate UV
	mg/dl	2.91	2.48	3.34	
Potassium	mmol/l	3.13	2.88	3.38	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	Biuret reaction end point
	g/dl	4.70	3.76	5.64	
Sodium	mmol/l	125	118	133	ISE method - indirect
Triglycerides	mmol/l	0.700	0.588	0.812	Lipase/GPO-PAP no correction
	mg/dl	62.0	52.0	72.0	
Urea	mmol/l	3.27	2.78	3.76	Urease kinetic
	mg/dl	19.7	16.7	22.7	
	mmol/l	3.27	2.78	3.76	BUN
Uric Acid (Urate)	mmol/l	0.190	0.163	0.217	Uricase peroxidase with ascorbate oxidase
	mg/dl	3.19	2.74	3.64	

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MEAN OF ALL INSTRUMENTS

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Alpha-HBDH	U/l	62	49	75	DGKC 37°C
	U/l	47	37	57	DGKC 30°C
	U/l	35	28	42	DGKC 25°C
Acid Phosphatase (non-prostatic)	U/l	6.50	4.36	8.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.72	3.16	6.28	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	4.30	2.88	5.72	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	8.48	5.68	11.3	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	10.8	7.24	14.4	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	13.2	8.84	17.6	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	26.6	22.6	30.6	Bromocresol Green
	g/dl	2.66	2.26	3.06	
	g/l	12.0	10.2	13.8	Bromocresol Purple
	g/dl	1.20	1.02	1.38	
	g/l	21.7	18.4	25.0	Vitros 250/500/700/950/5.1 FS
Alkaline Phosphatase	U/l	101	86	116	p-Nitrophenylphosphate AMP 37°C
	U/l	79	67	91	p-Nitrophenylphosphate AMP 30°C
	U/l	65	55	75	p-Nitrophenylphosphate AMP 25°C
	U/l	142	121	163	Diethanolamine buffer DEA 37°C
	U/l	111	94	128	Diethanolamine buffer DEA 30°C
	U/l	91	77	105	Diethanolamine buffer DEA 25°C
	U/l	99	84	114	Vitros 250/500/700/950/5.1 FS 37°C
ALT (GPT)	U/l	30	24	36	Tris buffer with P5P IFCC/SFBC 37°C
	U/l	22	18	26	Tris buffer with P5P IFCC/SFBC 30°C
	U/l	17	14	20	Tris buffer with P5P IFCC/SFBC 25°C
	U/l	29	23	35	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	21	17	25	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	16	13	19	Tris buffer no P5P IFCC/SFBC 25°C
	U/l	42	34	50	Vitros 250/500/700/950/5.1 FS 37°C
Amylase Total	U/l	129	110	148	Randox - Ethylidene pNPG7 37°C
	U/l	89	76	102	bioMerieux 2-chloro-pNPG3 37°C
	U/l	92	78	106	Randox EPS Liquid 37°C
	U/l	81	69	93	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	27	22	32	Tris buffer with P5P IFCC/SFBC 37°C
	U/l	18	15	21	Tris buffer with P5P IFCC/SFBC 30°C
	U/l	13	10	16	Tris buffer with P5P IFCC/SFBC 25°C
	U/l	25	20	30	Tris buffer no P5P IFCC/SFBC 37°C
	U/l	17	14	20	Tris buffer no P5P IFCC/SFBC 30°C
	U/l	12	10	14	Tris buffer no P5P IFCC/SFBC 25°C
	U/l	34	27	41	Vitros 250/500/700/950/5.1 FS 37°C
Bicarbonate	mmol/l	11.5	9.12	13.9	Enzymatic
	mmol/l	11.7	9.28	14.1	Vitros 250/500/700/950/5.1 FS

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MEAN OF ALL INSTRUMENTS

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Bile Acids	µmol/l	9.85	7.88	11.8	4th Generation Colorimetric
	µmol/l	13.9	11.1	16.7	5th Generation Colorimetric
Bilirubin Direct	µmol/l	14.1	11.1	17.1	Diazo with Sulphanilic Acid
	mg/dl	0.825	0.649	1.00	
	µmol/l	8.87	7.01	10.7	Vitros conjugated from BUBC
	mg/dl	0.519	0.410	0.628	
	µmol/l	9.60	7.58	11.6	Modified Jendrassik
mg/dl	0.562	0.443	0.681		
Bilirubin Total	µmol/l	17.5	13.8	21.2	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	
	µmol/l	13.4	10.6	16.2	Vitros 250/500/700/950 Total BUBC
	mg/dl	0.784	0.620	0.948	
	µmol/l	18.0	14.2	21.8	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	
	µmol/l	19.4	15.3	23.5	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.900	1.37	
Calcium	mmol/l	1.71	1.54	1.88	Arsenazo III
	mg/dl	6.85	6.17	7.53	
	mmol/l	1.66	1.49	1.83	Cresolphthalein complexone
	mg/dl	6.65	5.97	7.33	
	mmol/l	1.81	1.63	1.99	Ion selective electrode
	mg/dl	7.25	6.53	7.97	
Chloride	mmol/l	1.69	1.52	1.86	Vitros 250/500/700/950/5.1 FS
	mg/dl	6.77	6.09	7.45	
	mmol/l	83.6	78.6	88.6	Colorimetric
	mmol/l	88.4	83.1	93.7	ISE indirect
	mmol/l	90.2	84.8	95.6	Vitros 250/500/700/950/5.1 FS
Cholesterol	mmol/l	87.7	82.4	93.0	ISE direct
	mmol/l	3.46	2.94	3.98	Cholesterol Oxidase
	mg/dl	134	113	155	
	mmol/l	3.33	2.83	3.83	Vitros 250/500/700/950/5.1 FS
mg/dl	129	109	149		
CK Total	U/l	154	126	182	CK-NAC serum start (DGKC) 37°C
	U/l	96	79	113	CK-NAC serum start (DGKC) 30°C
	U/l	65	54	76	CK-NAC serum start (DGKC) 25°C
	U/l	162	133	191	CK-NAC substrate start (DGKC) 37°C
	U/l	101	83	119	CK-NAC substrate start (DGKC) 30°C
	U/l	69	57	81	CK-NAC substrate start (DGKC) 25°C
	U/l	167	137	197	CK-NAC (IFCC) 37°C
	U/l	105	86	124	CK-NAC (IFCC) 30°C
	U/l	71	58	84	CK-NAC (IFCC) 25°C
	U/l	154	126	182	Vitros 250/500/700/950/5.1 FS 37°C
Copper	µmol/l	12.4	10.5	14.3	Colorimetric
	µg/dl	78.9	66.8	91.0	

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Parameter	Einheit	Zielwert	von	bis	Methoden
Cortisol	nmol/l	107	85.6	128	Siemens Immulite 1000
	µg/dl	3.85	3.08	4.61	
Creatinine	µmol/l	95.0	77.9	112	Alkaline picrate no deproteinization
	mg/dl	1.07	0.880	1.26	
	µmol/l	91.0	74.6	107	Randox Enzymatic UV method
	mg/dl	1.03	0.843	1.22	
µmol/l	96.3	79.0	114	Vitros 250/500/700/950 double slide	
mg/dl	1.09	0.893	1.29		
D-3-Hydroxybutyrate	mmol/l	0.800	0.680	0.920	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	16.8	14.3	19.3	Siemens Immulite 1000
	ng/dl	1.31	1.12	1.51	
	pg/ml	13.1	11.2	15.1	
Gamma-GT	U/l	32	27	37	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	25	21	29	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	20	17	23	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	37	31	43	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	29	24	34	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	23	19	27	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	41	35	47	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	Gamma glutamyl-4-nitroanilide 25°C
	U/l	46	39	53	Vitros 250/500/700/950/5.1 FS 37°C
	U/l	33	28	38	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	26	22	30	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l	20	17	23	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	10	8	12	Triethanolamine buffer 50 mmol 37°C
	U/l	8	6	10	Triethanolamine buffer 50 mmol 30°C
	U/l	6	5	7	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	3.24	2.75	3.73	Hexokinase
	mg/dl	58.4	49.6	67.2	
	mmol/l	3.45	2.93	3.97	Glucose oxidase
	mg/dl	62.2	52.8	71.6	
mmol/l	3.25	2.76	3.74	Vitros 250/500/700/950/5.1 FS	
mg/dl	58.6	49.7	67.5		
Iron	µmol/l	23.2	19.0	27.4	Colorimetric without ppt.
	µg/dl	130	106	154	
Lactate	mmol/l	2.65	2.12	3.18	Enzymatic Colorimetric
	mg/dl	23.9	19.1	28.7	
LD (LDH)	U/l	137	116	158	P->L German methods 37°C
	U/l	99	84	114	P->L German methods 30°C
	U/l	69	59	79	P->L German methods 25°C
	U/l	56	48	64	L->P 37°C
	U/l	40	35	45	L->P 30°C
	U/l	28	24	32	L->P 25°C
	U/l	185	157	213	Vitros 250/500/700/950/5.1 FS 37°C
	U/l	59	50	68	L->P Roche/Randox 37°C
U/l	43	36	49	L->P Roche/Randox 30°C	
U/l	30	25	34	L->P Roche/Randox 25°C	

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Parameter	Einheit	Zielwert	von	bis	Methoden
Lipase	U/l	43	34	52	Randox Colorimetric 37°C
	U/l	233	187	279	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	0.590	0.472	0.708	Colorimetric
	mg/dl	0.410	0.328	0.492	
	mmol/l	0.500	0.400	0.600	Ion selective electrode
	mg/dl	0.347	0.278	0.416	
Magnesium	mmol/l	0.660	0.581	0.739	Calmagite
	mg/dl	1.60	1.41	1.79	
	mmol/l	0.673	0.592	0.754	Xylidyl Blue
	mg/dl	1.64	1.44	1.84	
	mmol/l	0.680	0.598	0.762	Vitros 250/500/700/950/5.1 FS
mg/dl	1.65	1.45	1.85		
NEFA	mmol/l	1.33	1.13	1.53	Colorimetric
Osmolality	mmol/kg	284	227	341	Freezing point depression
Phosphate Inorganic	mmol/l	0.924	0.785	1.06	Phosphomolybdate UV
	mg/dl	2.86	2.43	3.29	
	mmol/l	0.950	0.808	1.09	Vitros 250/500/700/950/5.1 FS
	mg/dl	2.95	2.50	3.40	
Potassium	mmol/l	3.17	2.92	3.42	ISE method - indirect
	mmol/l	3.16	2.91	3.41	Enzymatic
	mmol/l	3.23	2.97	3.49	ISE direct
	mmol/l	3.14	2.89	3.39	Vitros 250/500/700/950/5.1 FS
Protein Total	g/l	45.7	36.6	54.8	Biuret reaction end point
	g/dl	4.57	3.66	5.48	
	g/l	43.7	35.0	52.4	Vitros 250/500/700/950/5.1 FS
	g/dl	4.37	3.50	5.24	
PSA Total	ng/ml = µg/l	2.50	1.88	3.13	Abbott AxSYM - monoclonal
Sodium	mmol/l	123	116	130	Enzymatic
	mmol/l	125	118	133	ISE direct
	mmol/l	122	115	129	Vitros 250/500/700/950/5.1 FS
	mmol/l	125	118	133	ISE indirect
TIBC	µmol/l	27.5	21.7	33.3	Randox Direct
	µg/dl	154	121	187	
	µmol/l	25.7	20.3	31.1	FE+UIBC(saturation with iron)
	µg/dl	144	113	175	
Total T3	nmol/l	1.90	1.43	2.38	Siemens Immulite 1000
	ng/ml	1.24	0.930	1.55	
	ng/dl	124	93.1	155	
Total T4	nmol/l	55.5	41.6	69.4	Abbott AXSYM
	µg/dl	4.33	3.24	5.41	
	ng/ml	43.3	32.4	54.1	
Triglycerides	mmol/l	0.673	0.565	0.781	Lipase/GPO-PAP no correction
	mg/dl	59.6	50.0	69.2	
	mmol/l	0.780	0.655	0.905	Vitros 250/500/700/950/5.1 FS
mg/dl	69.0	58.0	80.0		

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

MEAN OF ALL INSTRUMENTS

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden	
Urea	mmol/l	2.82	2.40	3.24	Urease kinetic	
	mg/dl	16.9	14.4	19.4		
	mmol/l	5.63	4.79	6.47	Urease hypochlorite	
	mg/dl	33.8	28.8	38.8		
	mmol/l	2.58	2.19	2.97	Vitros 250/500/700/950/5.1 FS	
	mg/dl	15.5	13.2	17.8		
	mmol/l	3.89	3.31	4.47	Urease Berthelot	
	mg/dl	23.4	19.9	26.9		
	mmol/l	2.82	2.40	3.24	BUN	
	mg/dl	7.90	6.70	9.10		
	Uric Acid (Urate)	mmol/l	0.201	0.173	0.229	Uricase Peroxidase with ascorbate oxidase @ 546nm
		mg/dl	3.38	2.91	3.85	
mmol/l		0.207	0.178	0.236	Uricase peroxidase no ascorbate oxidase	
mg/dl		3.48	2.99	3.97		
mmol/l		0.201	0.173	0.229	Uricase peroxidase with ascorbate oxidase	
mg/dl		3.38	2.91	3.85		
mmol/l		0.190	0.160	0.220	Vitros 250/500/700/950/5.1 FS	
mg/dl		3.19	2.69	3.70		
Zinc	µmol/l	12.9	10.3	15.5	Colorimetric with deproteinisation	
	µg/dl	84.2	67.3	101		

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

OLYMPUS AU400/500/600/800

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	25.7	21.8	29.6	Bromocresol Green
	g/dl	2.57	2.18	2.96	
Alkaline Phosphatase	U/l	101	86	116	p-Nitrophenylphosphate AMP 37°C
	U/l	143	122	164	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	33	26	40	Tris buffer no P5P IFCC/SFBC 37°C
Amylase Total	U/l	86	73	99	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	26	21	31	Tris buffer no P5P IFCC/SFBC 37°C
Bicarbonate	mmol/l	11.0	8.72	13.3	Enzymatic
Bilirubin Direct	µmol/l	14.7	11.6	17.8	Diazo with Sulphanilic Acid
	mg/dl	0.860	0.679	1.04	
Bilirubin Total	µmol/l	24.5	19.4	29.6	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	
Calcium	mmol/l	1.70	1.53	1.87	Arsenazo III
	mg/dl	6.81	6.13	7.49	
Chloride	mmol/l	87.1	81.9	92.3	ISE indirect
Cholesterol	mmol/l	3.37	2.86	3.88	Cholesterol Oxidase
	mg/dl	130	110	150	
CK Total	U/l	173	142	204	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	106	86.9	125	Alkaline picrate no deproteinization
	mg/dl	1.20	0.982	1.42	
Gamma-GT	U/l	36	31	41	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	3.30	2.81	3.80	Hexokinase
	mg/dl	59.5	50.6	68.4	
Iron	µmol/l	23.8	19.5	28.1	Colorimetric without ppt.
	µg/dl	133	109	157	
LD (LDH)	U/l	140	119	161	P->L German methods 37°C
Magnesium	mmol/l	0.690	0.607	0.773	Xylidyl Blue
	mg/dl	1.68	1.48	1.88	
Phosphate Inorganic	mmol/l	0.910	0.774	1.05	Phosphomolybdate UV
	mg/dl	2.82	2.40	3.24	
Potassium	mmol/l	3.16	2.91	3.41	ISE method - indirect
Protein Total	g/l	45.7	36.6	54.8	Biuret reaction end point
	g/dl	4.57	3.66	5.48	
Sodium	mmol/l	124	117	131	ISE method - indirect
Triglycerides	mmol/l	0.700	0.588	0.812	Lipase/GPO-PAP no correction
	mg/dl	62.0	52.0	72.0	
Urea	mmol/l	2.82	2.40	3.24	Urease kinetic
	mg/dl	16.9	14.4	19.4	
	mmol/l	2.82	2.40	3.24	BUN
	mg/dl	7.90	6.70	9.10	
Uric Acid (Urate)	mmol/l	0.202	0.174	0.230	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	3.39	2.92	3.86	

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL

Inhalt 20 x 5ml Verw. bis: 2011-12

RX DAYTONA /IMOLA

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	27.1	23.0	31.2	Bromocresol Green
	g/dl	2.71	2.30	3.12	
Alkaline Phosphatase	U/l	105	89	121	p-Nitrophenylphosphate AMP 37°C
	U/l	140	119	161	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	31	25	37	Tris buffer no P5P IFCC/SFBC 37°C
Amylase Total	U/l	92	78	106	Randox EPS Liquid 37°C
AST (GOT)	U/l	27	22	32	Tris buffer no P5P IFCC/SFBC 37°C
Bicarbonate	mmol/l	10.9	8.64	13.2	Enzymatic
Bile Acids	µmol/l	13.9	11.1	16.7	5th Generation Colorimetric
Bilirubin Direct	µmol/l	14.6	11.5	17.7	Diazo with Sulphanilic Acid
	mg/dl	0.854	0.673	1.04	
Bilirubin Total	µmol/l	19.2	15.2	23.2	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	
Calcium	mmol/l	1.73	1.56	1.90	Arsenazo III
	mg/dl	6.93	6.25	7.62	
Chloride	mmol/l	87.7	82.4	93.0	ISE direct
Cholesterol	mmol/l	3.53	3.00	4.06	Cholesterol Oxidase
	mg/dl	136	116	156	
CK Total	U/l	153	125	181	CK-NAC substrate start (DGKC) 37°C
	U/l	158	130	186	CK-NAC serum start (DGKC) 37°C
Creatinine	µmol/l	105	86.1	124	Alkaline picrate no deproteinization
	mg/dl	1.19	0.973	1.41	
Gamma-GT	U/l	33	28	38	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	3.16	2.69	3.63	Hexokinase
	mg/dl	56.9	48.5	65.3	
	mmol/l	3.55	3.02	4.08	Glucose oxidase
	mg/dl	64.0	54.4	73.6	
Iron	µmol/l	21.8	17.9	25.7	Colorimetric without ppt.
	µg/dl	122	100	144	
LD (LDH)	U/l	119	101	137	P->L German methods 37°C
	U/l	68	58	78	L->P 37°C
Lipase	U/l	43	34	52	Randox Colorimetric 37°C
Lithium	mmol/l	0.590	0.472	0.708	Colorimetric
	mg/dl	0.410	0.328	0.492	
Magnesium	mmol/l	0.660	0.581	0.739	Xylidyl Blue
	mg/dl	1.60	1.41	1.79	
Phosphate Inorganic	mmol/l	0.960	0.816	1.10	Phosphomolybdate UV
	mg/dl	2.98	2.53	3.43	
Potassium	mmol/l	3.23	2.97	3.49	ISE method - direct
Protein Total	g/l	45.3	36.2	54.4	Biuret reaction end point
	g/dl	4.53	3.62	5.44	
Sodium	mmol/l	121	114	128	ISE method - direct

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

RX DAYTONA /IMOLA

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
TIBC	µmol/l	27.5	21.7	33.3	Randox Direct
	µg/dl	154	121	187	
Triglycerides	mmol/l	0.690	0.580	0.800	Lipase/GPO-PAP no correction
	mg/dl	61.1	51.3	70.9	
Urea	mmol/l	2.78	2.36	3.20	Urease kinetic
	mg/dl	16.7	14.2	19.2	
	mmol/l	2.78	2.36	3.20	BUN
	mg/dl	7.80	6.63	8.97	
Uric Acid (Urate)	mmol/l	0.198	0.170	0.230	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	3.33	2.86	3.86	

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

SIEMENS ADVIA 1650

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	24.9	21.2	28.6	Bromocresol Green
	g/dl	2.49	2.12	2.86	
Alkaline Phosphatase	U/l	106	90	122	p-Nitrophenylphosphate AMP 37°C
	U/l	142	121	163	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	36	29	43	Tris buffer no P5P IFCC/SFBC 37°C
Amylase Total	U/l	86	73	99	pNP Maltotrioxide substrates 37°C
AST (GOT)	U/l	31	25	37	Tris buffer no P5P IFCC/SFBC 37°C
Bicarbonate	mmol/l	12.4	9.83	15.0	Enzymatic
Bilirubin Direct	µmol/l	14.6	11.5	17.7	Diazo with Sulphanilic Acid
	mg/dl	0.854	0.673	1.04	
	µmol/l	13.3	10.5	16.1	Vanadate Oxidation
	mg/dl	0.780	0.610	0.940	
Bilirubin Total	µmol/l	19.0	15.0	23.0	Vanadate Oxidation
	mg/dl	1.11	0.880	1.35	
Calcium	mmol/l	1.60	1.44	1.76	Cresolphthalein complexone
	mg/dl	6.41	5.77	7.05	
	mmol/l	1.75	1.58	1.93	Arsenazo III
	mg/dl	7.01	6.33	7.74	
Chloride	mmol/l	87.9	82.6	93.2	ISE indirect
Cholesterol	mmol/l	3.57	3.03	4.11	Cholesterol Oxidase
	mg/dl	138	117	159	
CK Total	U/l	148	121	175	CK-NAC serum start (DGKC) 37°C
Creatinine	µmol/l	86.5	70.9	102	Alkaline picrate no deproteinization
	mg/dl	0.977	0.801	1.15	
Gamma-GT	U/l	31	26	36	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	3.33	2.83	3.83	Glucose oxidase
	mg/dl	60.0	51.0	69.0	
	mmol/l	3.37	2.86	3.88	Hexokinase
	mg/dl	60.7	51.5	69.9	
Iron	µmol/l	23.4	19.2	27.6	Colorimetric without ppt.
	µg/dl	131	107	155	
LD (LDH)	U/l	59	50	68	L->P 37°C
	U/l	130	111	150	P->L German methods 37°C
Magnesium	mmol/l	0.650	0.572	0.728	Xylidyl Blue
	mg/dl	1.58	1.39	1.77	
Phosphate Inorganic	mmol/l	0.920	0.782	1.06	Phosphomolybdate UV
	mg/dl	2.85	2.42	3.28	
Potassium	mmol/l	3.13	2.88	3.38	ISE method - indirect
Protein Total	g/l	45.4	36.3	54.5	Biuret reaction end point
	g/dl	4.54	3.63	5.45	
Sodium	mmol/l	125	118	133	ISE method - indirect
Triglycerides	mmol/l	0.660	0.554	0.766	Lipase/GPO-PAP no correction
	mg/dl	58.4	49.0	67.8	

BGT

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

SIEMENS ADVIA 1650

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Urea	mmol/l	2.94	2.50	3.38	Urease kinetic
	mg/dl	17.7	15.0	20.4	
	mmol/l	2.94	2.50	3.38	BUN
	mg/dl	8.23	7.00	9.46	
Uric Acid (Urate)	mmol/l	0.203	0.175	0.231	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	3.41	2.94	3.88	

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL

Inhalt 20 x 5ml Verw. bis: 2011-12

SIEMENS DIMENSION

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	11.1	9.44	12.8	Bromocresol Purple
	g/dl	1.11	0.944	1.28	
Alkaline Phosphatase	U/l	105	89	121	p-Nitrophenylphosphate AMP 37°C
	U/l	106	90	122	Randox AMP 37°C
ALT (GPT)	U/l	42	34	50	Tris buffer with P5P IFCC/SFBC 37°C
Amylase Total	U/l	98	83	113	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	32	26	38	Tris buffer with P5P IFCC/SFBC 37°C
Bicarbonate	mmol/l	11.8	9.36	14.2	Enzymatic
Bilirubin Total	µmol/l	16.9	13.4	20.4	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.784	1.19	
Calcium	mmol/l	1.68	1.51	1.85	Cresolphthalein complexone
	mg/dl	6.73	6.05	7.41	
Chloride	mmol/l	89.2	83.8	94.6	ISE indirect
Cholesterol	mmol/l	3.34	2.84	3.84	Cholesterol Oxidase
	mg/dl	129	110	148	
CK Total	U/l	155	127	183	Modified Olivier Rosalki 37°C
Creatinine	µmol/l	83.4	68.4	98.4	Alkaline picrate no deproteinization
	mg/dl	0.942	0.773	1.11	
Gamma-GT	U/l	45	38	52	Siemens Dimension (IFCC) 37°C
Glucose	mmol/l	3.20	2.72	3.68	Hexokinase
	mg/dl	57.7	49.0	66.4	
Iron	µmol/l	21.6	17.7	25.5	Colorimetric without ppt.
	µg/dl	121	98.9	143	
LD (LDH)	U/l	46	39	53	L->P 37°C
Magnesium	mmol/l	0.610	0.537	0.683	Methylthymol blue
	mg/dl	1.48	1.30	1.66	
Phosphate Inorganic	mmol/l	0.915	0.778	1.05	Phosphomolybdate UV
	mg/dl	2.84	2.41	3.27	
Potassium	mmol/l	3.15	2.90	3.40	ISE method - indirect
Protein Total	g/l	46.1	36.9	55.3	Biuret reaction end point
	g/dl	4.61	3.69	5.53	
Sodium	mmol/l	126	118	134	ISE method - indirect
Triglycerides	mmol/l	0.695	0.584	0.806	Lipase/GPO-PAP no correction
	mg/dl	61.5	51.7	71.3	
Urea	mmol/l	2.95	2.51	3.39	BUN
	mg/dl	8.30	7.10	9.50	
	mmol/l	3.00	2.55	3.45	Urease kinetic
	mg/dl	18.0	15.3	20.7	
Uric Acid (Urate)	mmol/l	0.192	0.170	0.220	Uricase 293nm UV
	mg/dl	3.23	2.86	3.70	

Keul-o-trol RR low (BOV ASY CONTROL 1)

Art.-Nr.: KG1027 Ch.-B.: 178SL Inhalt 20 x 5ml Verw. bis: 2011-12

Synchron CX4/5/7/9

Bereich

Parameter	Einheit	Zielwert	von	bis	Methoden
Albumin	g/l	14.0	11.9	16.1	Bromocresol Purple
	g/dl	1.40	1.19	1.61	
Alkaline Phosphatase	U/l	116	99	133	p-Nitrophenylphosphate AMP 37°C
	U/l	90	77	103	p-Nitrophenylphosphate AMP 30°C
ALT (GPT)	U/l	50	40	60	Henry 37°C
	U/l	37	30	44	Henry 30°C
Amylase Total	U/l	79	67	91	Beckman maltotetraose 37°C
	U/l	92	78	106	Randox EPS Liquid 37°C
AST (GOT)	U/l	26	21	31	Henry 37°C
	U/l	18	14	21	Henry 30°C
Bilirubin Total	µmol/l	18.6	14.7	22.5	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	
Calcium	mmol/l	1.81	1.63	1.99	Ion selective electrode
	mg/dl	7.25	6.53	7.97	
Cholesterol	mmol/l	3.90	3.32	4.49	Cholesterol Oxidase
	mg/dl	151	128	174	
CK Total	U/l	174	143	205	CK-NAC substrate start (DGKC) 37°C
	U/l	109	90	128	CK-NAC substrate start (DGKC) 30°C
Creatinine	µmol/l	103	84.5	122	Alkaline picrate no deproteinization
	mg/dl	1.16	0.955	1.37	
Gamma-GT	U/l	41	35	47	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	Gamma glutamyl-4-nitroanilide 30°C
Glucose	mmol/l	3.40	2.89	3.91	Hexokinase
	mg/dl	61.3	52.1	70.5	
LD (LDH)	U/l	168	143	193	P->L German methods 37°C
	U/l	121	103	139	P->L German methods 30°C
Magnesium	mmol/l	0.660	0.581	0.739	Calmagite
	mg/dl	1.60	1.41	1.79	
Phosphate Inorganic	mmol/l	0.870	0.740	1.00	Phosphomolybdate UV
	mg/dl	2.70	2.29	3.11	
Potassium	mmol/l	3.30	3.04	3.56	ISE method - indirect
Sodium	mmol/l	130	122	138	ISE method - indirect
Triglycerides	mmol/l	0.550	0.462	0.638	Lipase/GPO-PAP no correction
	mg/dl	48.7	40.9	56.5	
Urea	mmol/l	3.10	2.64	3.57	Beckman-Conductivity
	mg/dl	18.6	15.9	21.3	
	mmol/l	3.10	2.64	3.57	BUN
	mg/dl	8.70	7.40	10.0	
Uric Acid (Urate)	mmol/l	0.230	0.198	0.262	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	3.86	3.33	4.39	