



COBAS INTEGRA 400 plus analyzer

Value sheet Ver.1

Short name / component	Methods	Test-ID	Value	Range	1s	Unit
ALTL Alanine Aminotransferase	IFCC with pyridoxal phosphate serum, plasma	0-595	41.7 0.696	34.2 - 49.2 0.570 - 0.822	2.5 0.042	U/L μKat/L
ALTL Alanine Aminotransferase	IFCC without pyridoxal phosphate serum, plasma	0-495	40.6 0.678	33.4 - 47.8 0.555 - 0.801	2.4 0.041	U/L μKat/L
ALB2 Albumin	BCG Gen.2 serum, plasma	0-592	51.3 780 5.13	42.0 - 60.6 639 - 921 4.20 - 6.06	3.1 47 0.31	g/L μmol/L g/dL
ALP2L Alkaline Phosphatase	IFCC acc. to Schumann Gen.2 serum, plasma	0-550	93.0 1.55	76.2 - 109.8 1.28 - 1.82	5.6 0.09	U/L μKat/L
ALP2S Alkaline Phosphatase	IFCC acc. to Schumann Gen.2 serum, plasma	0-551	93.0 1.55	76.2 - 109.8 1.28 - 1.82	5.6 0.09	U/L μKat/L
ALP2S Alkaline Phosphatase	IFCC acc. to Schumann Gen.2 primary tube serum, plasma	0-554	93.0 1.55	76.2 - 109.8 1.28 - 1.82	5.6 0.09	U/L μKat/L
ALP2L Alkaline Phosphatase	IFCC acc. to Tietz Gen.2 serum, plasma	0-550 *	89.6 1.50	73.4 - 105.8 1.23 - 1.77	5.4 0.09	U/L μKat/L
ALP2S Alkaline Phosphatase	IFCC acc. to Tietz Gen.2 serum, plasma	0-551 *	89.6 1.50	73.4 - 105.8 1.23 - 1.77	5.4 0.09	U/L μKat/L
ALP2S Alkaline Phosphatase	IFCC acc. to Tietz Gen.2 primary tube serum, plasma	0-554 *	89.6 1.50	73.4 - 105.8 1.23 - 1.77	5.4 0.09	U/L μKat/L
AMYL2 alpha Amylase	IFCC EPS ver.2 serum, plasma	0-609	78.8 1.32	64.7 - 92.9 1.08 - 1.56	4.7 0.08	U/L μKat/L
AMYL2 alpha Amylase	IFCC EPS ver.2 urine	0-509	78.8 1.32	64.7 - 92.9 1.08 - 1.56	4.7 0.08	U/L μKat/L
AMY-P alpha Amylase pancreatic	EPS liquid serum, plasma	0-662	37.3 0.623	30.7 - 43.9 0.512 - 0.734	2.2 0.037	U/L μKat/L

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Short name / component	Methods	Test-ID	Value	Range	1s	Unit
AMY-P alpha Amylase pancreatic	EPS liquid urine	0-663	37.3 0.623	30.7 - 43.9 0.512 - 0.734	2.2 0.037	U/L μKat/L
ASTL Aspartate Aminotransferase	IFCC with pyridoxal phosphate serum, plasma	0-594	39.3 0.656	32.1 - 46.5 0.539 - 0.773	2.4 0.039	U/L μKat/L
ASTL Aspartate Aminotransferase	IFCC without pyridoxal phosphate serum, plasma	0-494	38.6 0.645	31.7 - 45.5 0.528 - 0.762	2.3 0.039	U/L μKat/L
CO2-L Bicarbonate	kinetic liquid serum, plasma	0-625	15.8	13.1 - 18.5	0.9	mmol/L
BIL-D Bilirubin direct	Diazo serum, plasma	0-249	7.36 0.431 4.31	5.59 - 9.13 0.329 - 0.533 3.29 - 5.33	0.59 0.034 0.34	μmol/L mg/dL mg/L
BILD2 Bilirubin direct	Diazo Gen.2 Doumas serum, plasma	0-735	10.4 0.608 6.08	8.0 - 12.8 0.461 - 0.755 4.61 - 7.55	0.8 0.049 0.49	μmol/L mg/dL mg/L
BILT3 Bilirubin total	Gen.3 serum, plasma	0-297	17.6 1.03	14.3 - 20.9 0.85 - 1.21	1.1 0.06	μmol/L mg/dL
BILT3 Bilirubin total	Gen.3 serum, plasma	0-712	17.6 1.03	14.3 - 20.9 0.85 - 1.21	1.1 0.06	μmol/L mg/dL
BUN Blood Urea Nitrogen	Urease/GLDH serum, plasma	0-003	6.34 17.8 0.178	5.38 - 7.30 15.1 - 20.5 0.151 - 0.205	0.32 0.9 0.009	mmol/L mg/dL g/L
CA2 Calcium	5-Nitro-5'-methyl-BAPTA Gen.2 serum, plasma	0-042	2.26 9.06	1.99 - 2.53 7.98 - 10.14	0.09 0.36	mmol/L mg/dL
CL-D Chloride	I.S.E. direct potentiometry serum, plasma	0-403	92.4 328	84.0 - 100.8 298 - 358	2.8 10	mmol/L mg/dL
CL-I Chloride	I.S.E. indirect potentiometry serum, plasma	0-503	89.3 317	81.2 - 97.4 287 - 347	2.7 10	mmol/L mg/dL



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CHOL2 Cholesterol	CHOD-PAP Gen.2 stand. Abell-Kendall serum, plasma	0-586	1.75 67.7 0.677	1.48 - 2.02 57.5 - 77.9 0.575 - 0.779	0.09 3.4 0.034	mmol/L mg/dL g/L
CHOL2 Cholesterol	CHOD-PAP Gen.2 stand. ID/MS serum, plasma	0-586	1.72 66.5 0.665	1.45 - 1.99 56.6 - 76.4 0.566 - 0.764	0.09 3.3 0.033	mmol/L mg/dL g/L
CHE2 Cholinesterase	butyrylthiocholine Gen.2 serum, plasma	0-021	5720 95.5 5.72	4700 - 6740 78.4 - 112.6 4.70 - 6.74	340 5.7 0.34	U/L μKat/L kU/L
CHED2 Cholinesterase	butyrylthiocholine Gen.2 serum, plasma	0-019	5720 95.5 5.72	4700 - 6740 78.4 - 112.6 4.70 - 6.74	340 5.7 0.34	U/L μKat/L kU/L
CK Creatine Kinase	UV acc. to IFCC liquid serum, plasma	0-045	145 2.42	118 - 172 1.97 - 2.87	9 0.15	U/L μKat/L
CKL Creatine Kinase	IFCC liquid serum, plasma	0-323	145 2.42	118 - 172 1.97 - 2.87	9 0.15	U/L μKat/L
CREJ2 Creatinine	Jaffé Gen.2 compensated serum, plasma	0-445	89.4 1.01 0.089 10.1	73.2 - 105.6 0.83 - 1.19 0.074 - 0.104 8.3 - 11.9	5.4 0.06 0.005 0.6	μmol/L mg/dL mmol/L mg/L
CREP2 Creatinine	plus ver.2 serum, plasma	0-612	77.2 0.872 0.077 8.72	63.4 - 91.0 0.716 - 1.028 0.062 - 0.092 7.16 - 10.28	4.6 0.052 0.005 0.52	μmol/L mg/dL mmol/L mg/L
GGT-2 gamma Glutamyltransferase	liquid ver.2 stand. IFCC serum, plasma	0-498	49.7 0.830	40.7 - 58.7 0.680 - 0.980	3.0 0.050	U/L μKat/L
GGT-2 gamma Glutamyltransferase	liquid ver.2 stand. Szasz serum, plasma	0-598	44.5 0.743	36.4 - 52.6 0.608 - 0.878	2.7 0.045	U/L μKat/L



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GLUC2 Glucose	HK CSF	0-413	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC2 Glucose	HK serum, plasma	0-213	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC2 Glucose	HK urine	0-313	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 CSF	0-051	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 serum, plasma	0-031	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 STAT CSF	0-251	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 STAT serum, plasma	0-231	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 STAT urine	0-241	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
GLUC3 Glucose	HK Gen.3 urine	0-141	5.00 90.1 0.901	4.25 - 5.75 76.6 - 103.6 0.766 - 1.036	0.25 4.5 0.045	mmol/L mg/dL g/L
IRON2 Iron	FerroZine Gen.2 serum, plasma	0-596	18.8 105 1.05	15.5 - 22.1 87 - 123 0.87 - 1.23	1.1 6 0.06	µmol/L µg/dL mg/L





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LACT2 Lactate	enzymatic colorimetric test Gen.2 CSF	0-506	1.56 14.1 141	1.29 - 1.83 11.7 - 16.5 117 - 165	0.09 0.8 8	mmol/L mg/dL mg/L
LACT2 Lactate	enzymatic colorimetric test Gen.2 plasma	0-606	1.56 14.1 141	1.29 - 1.83 11.7 - 16.5 117 - 165	0.09 0.8 8	mmol/L mg/dL mg/L
LDHI2 Lactate dehydrogenase	IFCC liquid ver.2 serum, plasma	0-607	148 2.47	121 - 175 2.02 - 2.92	9 0.15	U/L μKat/L
LIPC Lipase	enzymatic colorimetric test serum, plasma	0-052	44.8 0.748	36.7 - 52.9 0.613 - 0.883	2.7 0.045	U/L μKat/L
LIPC Lipase	enzymatic colorimetric test serum, plasma	0-100	44.8 0.748	36.7 - 52.9 0.613 - 0.883	2.7 0.045	U/L μKat/L
LI-D Lithium	I.S.E. direct potentiometry serum, plasma	0-404	0.870 0.604	0.765 - 0.975 0.532 - 0.676	0.035 0.024	mmol/L mg/dL
MG Magnesium	Chlorophosphonazo III serum, plasma	0-059	0.788 1.58 1.91	0.692 - 0.884 1.40 - 1.76 1.67 - 2.15	0.032 0.06 0.08	mmol/L mEq/L mg/dL
PHOS2 Phosphate (inorganic)	molybdate UV ver.2 serum, plasma	0-614	1.18 3.66 36.6	1.00 - 1.36 3.12 - 4.20 31.2 - 42.0	0.06 0.18 1.8	mmol/L mg/dL mg/L
K-D Potassium	I.S.E. direct potentiometry serum, plasma	0-402	3.53 13.8	3.20 - 3.86 12.6 - 15.0	0.11 0.4	mmol/L mg/dL
K-I Potassium	I.S.E. indirect potentiometry serum, plasma	0-502	3.25 12.7	2.95 - 3.55 11.5 - 13.9	0.10 0.4	mmol/L mg/dL
Na-D Sodium	I.S.E. direct potentiometry serum, plasma	0-401	133 306	121 - 145 279 - 333	4 9	mmol/L mg/dL
Na-I Sodium	I.S.E. indirect potentiometry serum, plasma	0-501	122 281	110 - 134 257 - 305	4 8	mmol/L mg/dL



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Short name / component	Methods	Test-ID	Value	Range	1s	Unit
TP2 Total Protein	Biuret Gen.2 monochromatic serum, plasma	0-227	65.5	57.7 - 73.3	2.6	g/L
			6.55	5.77 - 7.33	0.26	g/dL
TP2 Total Protein	Biuret Gen.2 serum, plasma	0-027	62.2	54.7 - 69.7	2.5	g/L
			6.22	5.47 - 6.97	0.25	g/dL
TRIGL Triglycerides	GPO-PAP serum, plasma	0-010	1.31	1.10 - 1.52	0.07	mmol/L
			116	98 - 134	6	mg/dL
			1.16	0.98 - 1.34	0.06	g/L
UIBC Unsaturated Iron-Binding Capacity	FerroZine serum, plasma	0-463	23.4	18.6 - 28.2	1.6	µmol/L
			131	104 - 158	9	µg/dL
			1.31	1.04 - 1.58	0.09	mg/L
UREAL Urea/BUN	Urease/GLDH serum, plasma	0-003	6.34	5.38 - 7.30	0.32	mmol/L
			38.1	32.4 - 43.8	1.9	mg/dL
			0.381	0.324 - 0.438	0.019	g/L
UA2 Uric Acid	enzymatic colorimetric test ver.2 serum, plasma	0-615	266	227 - 305	13	µmol/L
			4.47	3.81 - 5.13	0.22	mg/dL
			44.7	38.1 - 51.3	2.2	mg/L



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ID/MS

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ALTL Alanine Aminotransferase	IFCC without pyridoxal phosphate serum, plasma	685	40.6 0.678	33.4 - 47.8 0.555 - 0.801	2.4 0.041	U/L μKat/L
ALTL Alanine Aminotransferase	IFCC with pyridoxal phosphate serum, plasma	684	41.7 0.696	34.2 - 49.2 0.570 - 0.822	2.5 0.042	U/L μKat/L
ALB2 Albumin	BCG Gen.2 serum, plasma	413	51.3 780	42.0 - 60.6 639 - 921	3.1 47	g/L μmol/L
ALP2S Alkaline Phosphatase	IFCC acc. to Schumann Gen.2 serum, plasma	158	93.0 1.55	76.2 - 109.8 1.28 - 1.82	5.6 0.09	U/L μKat/L
ALP2S Alkaline Phosphatase	IFCC acc. to Tietz Gen.2 serum, plasma	158 *	89.6 1.50	73.4 - 105.8 1.23 - 1.77	5.4 0.09	U/L μKat/L
AMYL2 alpha Amylase	IFCC EPS ver.2 serum, plasma	570	78.8 1.32	64.7 - 92.9 1.08 - 1.56	4.7 0.08	U/L μKat/L
AMY-P alpha Amylase pancreatic	EPS liquid serum, plasma	571	37.3 0.623	30.7 - 43.9 0.512 - 0.734	2.2 0.037	U/L μKat/L
ASTL Aspartate Aminotransferase	IFCC without pyridoxal phosphate serum, plasma	687	38.6 0.645	31.7 - 45.5 0.528 - 0.762	2.3 0.039	U/L μKat/L
ASTLP Aspartate Aminotransferase	IFCC with pyridoxal phosphate serum, plasma	686	39.3 0.656	32.1 - 46.5 0.539 - 0.773	2.4 0.039	U/L μKat/L
CO2-L Bicarbonate	kinetic liquid serum, plasma	156	15.8 15.8	13.1 - 18.5 13.1 - 18.5	0.9 0.9	mmol/L mEq/L
BILD2 Bilirubin direct	Diazo Gen.2 Doumas serum, plasma	735	10.4 0.608	8.0 - 12.8 0.461 - 0.755	0.8 0.049	μmol/L mg/dL
BILT3 Bilirubin total	Gen.3 serum, plasma	297	17.6 1.03	14.3 - 20.9 0.85 - 1.21	1.1 0.06	μmol/L mg/dL
BILT3 Bilirubin total	Gen.3 serum, plasma	712	17.6 1.03	14.3 - 20.9 0.85 - 1.21	1.1 0.06	μmol/L mg/dL

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BUN Blood Urea Nitrogen	Urease/GLDH serum, plasma	418	6.34 17.8	5.38 - 7.30 15.1 - 20.5	0.32 0.9	mmol/L mg/dL
CA2 Calcium	5-Nitro-5'-methyl-BAPTA serum, plasma	698	2.26 9.06	1.99 - 2.53 7.98 - 10.14	0.09 0.36	mmol/L mg/dL
CL-I Chloride	I.S.E. indirect potentiometry serum, plasma	991	89.3 317	81.2 - 97.4 287 - 347	2.7 10	mmol/L mg/dL
CHO2A Cholesterol	CHOD-PAP Gen.2 stand. Abell-Kendall serum, plasma	433	1.75 67.7	1.48 - 2.02 57.5 - 77.9	0.09 3.4	mmol/L mg/dL
CHOL2 Cholesterol	CHOD-PAP Gen.2 stand. ID/MS serum, plasma	798	1.72 66.5	1.45 - 1.99 56.6 - 76.4	0.09 3.3	mmol/L mg/dL
CK Creatine Kinase	UV acc. to IFCC liquid serum, plasma	550	145 2.42	118 - 172 1.97 - 2.87	9 0.15	U/L μKat/L
CKL Creatine Kinase	IFCC liquid serum, plasma	057	145 2.42	118 - 172 1.97 - 2.87	9 0.15	U/L μKat/L
CREJ2 Creatinine	Jaffé Gen.2 compensated serum, plasma	690	89.4 1.01	73.2 - 105.6 0.83 - 1.19	5.4 0.06	μmol/L mg/dL
CREP2 Creatinine	plus ver.2 serum, plasma	652	77.2 0.872	63.4 - 91.0 0.716 - 1.028	4.6 0.052	μmol/L mg/dL
GGT-2 gamma Glutamyltransferase	liquid ver.2 stand. IFCC serum, plasma	220	49.7 0.830	40.7 - 58.7 0.680 - 0.980	3.0 0.050	U/L μKat/L
GGT-2 gamma Glutamyltransferase	liquid ver.2 stand. Szasz serum, plasma	480	44.5 0.743	36.4 - 52.6 0.608 - 0.878	2.7 0.045	U/L μKat/L
GLUC2 Glucose	HK serum, plasma	767	5.00 90.1	4.25 - 5.75 76.6 - 103.6	0.25 4.5	mmol/L mg/dL
IRON2 Iron	FerroZine Gen.2 serum, plasma	661	18.8 105	15.5 - 22.1 87 - 123	1.1 6	μmol/L μg/dL



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LACT2 Lactate	enzymatic colorimetric test Gen.2 plasma	040	1.56 14.1	1.29 - 1.83 11.7 - 16.5	0.09 0.8	mmol/L mg/dL
LDHI2 Lactate dehydrogenase	IFCC liquid ver.2 serum, plasma	080	148 2.47	121 - 175 2.02 - 2.92	9 0.15	U/L μKat/L
LIPC Lipase	enzymatic colorimetric test serum, plasma	789	44.8 0.748	36.7 - 52.9 0.613 - 0.883	2.7 0.045	U/L μKat/L
LIPC Lipase colorimetric	enzymatic colorimetric test serum, plasma	731	44.8 0.748	36.7 - 52.9 0.613 - 0.883	2.7 0.045	U/L μKat/L
MG Magnesium	Chlorophosphonazo III serum, plasma	693	0.788 1.91	0.692 - 0.884 1.67 - 2.15	0.032 0.08	mmol/L mg/dL
PHOS2 Phosphate (inorganic)	molybdate UV ver.2 serum, plasma	714	1.18 3.66	1.00 - 1.36 3.12 - 4.20	0.06 0.18	mmol/L mg/dL
K-I Potassium	I.S.E. indirect potentiometry serum, plasma	990	3.25 12.7	2.95 - 3.55 11.5 - 13.9	0.10 0.4	mmol/L mg/dL
Na-I Sodium	I.S.E. indirect potentiometry serum, plasma	989	122 281	110 - 134 257 - 305	4 8	mmol/L mg/dL
TP2 Total Protein	Biuret Gen.2 monochromatic serum, plasma	227	65.5 6.55	57.7 - 73.3 5.77 - 7.33	2.6 0.26	g/L g/dL
TRIGL Triglycerides	GPO-PAP serum, plasma	781	1.31 116	1.10 - 1.52 98 - 134	0.07 6	mmol/L mg/dL
UREAL Urea/BUN	Urease/GLDH serum, plasma	418	6.34 38.1	5.38 - 7.30 32.4 - 43.8	0.32 1.9	mmol/L mg/dL
UA2 Uric Acid	enzymatic colorimetric test ver.2 serum, plasma	700	266 4.47	227 - 305 3.81 - 5.13	13 0.22	μmol/L mg/dL



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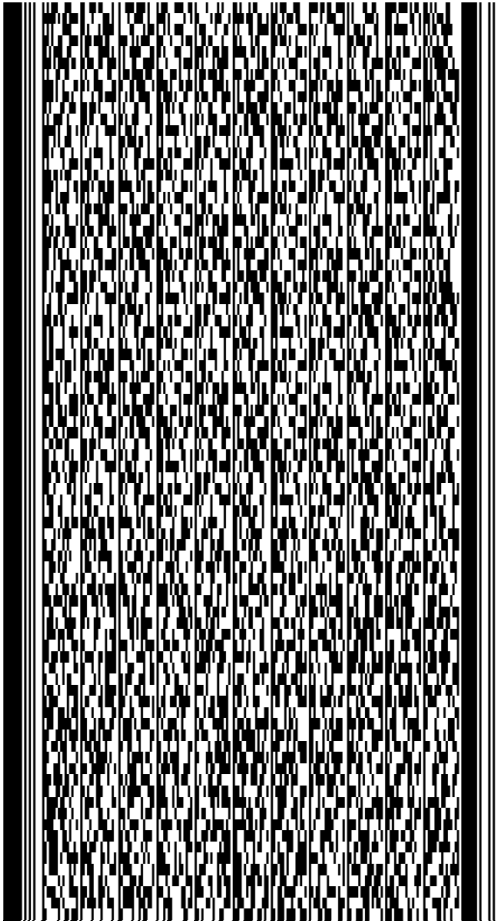
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