CONTROL LEVEL 1
HUMAN SERA

CAT. NO. HNC200
LOT NO. 941UN

MEDTEST DX
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Control Level 1

LOT NO. 941UN **SIZE:** 10 x 5 mL
EXPIRATION: 2018-06 **CAT. NO.** HNC200

Carefully reconstitute each vial of lyophilized serum with exactly 5 mL of distilled water.

INTENDED USE

MedTest DX Control Level 1 is lyophilized human based control sera for use in the quality control of diagnostic assays. Human-sera can be supplied as an assayed serum for control of accuracy or as a precision serum for control of reproducibility. Constituent concentrations are available at 2 levels.

VALUE ASSIGNMENTS

Values are also collected from approximately 3000 laboratories worldwide and a value is assigned using a unique statistical analysis. With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ± 2 S.D. This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

PREPARATION

Procedure
1. Open the vial carefully, avoiding any loss of material.
2. Reconstitute in the appropriate accurately measured volume of distilled water at +20 to +25°C.
3. Replace the rubber stopper, close vial and let stand for 30 minutes out of bright light before use.
4. Ensure that contents are completely dissolved by swirling gently.
5. After 30 minutes, invert vial to ensure that all traces of dry material are dissolved.
6. Do not shake the vial.

The serum can then be used with the manual tests or with automated instruments. The serum should only be reconstituted using this procedure.

STABILITY

The serum is stable for 4 years after date of manufacture when stored at a constant +4°C. The expiration date is illustrated on the side of each pack.

Once reconstituted, the components of the serum are stable for 8 hours at +25°C or 7 days at +4°C, and at least 1 month when frozen once at -20°C (see Limitations).

LIMITATIONS

For Total & Prostatic Acid Phosphatase, the material should be stabilized by adding 1 drop (25 - 30 µl) of 0.7 M Acetic acid solution to 1 mL of the serum. After stabilization, Total & Prostatic Acid Phosphatase is stable for at least 2 hours at +25°C, at least 2 days at +4°C, and at least 1 month 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 is allowed to stand for 1 hour at +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 at least 4 hours at +25°C and at least 8 hours at +4° C. DO NOT FREEZE.

Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.

Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot. The control should not be used as a calibration material.

WARNINGS / PRECAUTIONS

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.

Manufactured in the U.K. for

MEDTEST DX
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MEAN OF ALL INSTRUMENTS

COMPONENT	UNITS	TARGET	RANGE		METHOD
			LOW	HIGH	
Albumin	g/l	40.5	34.4	46.6	Bromocresol Green
	g/dl	4.05	3.44	4.66	
	g/l	41.4	35.2	47.6	Bromocresol Purple
	g/dl	4.14	3.52	4.76	
	g/l	38.4	32.6	44.2	Dry Chemistry
	g/dl	3.84	3.26	4.42	
Bicarbonate (CO2)	mmol/l	13.8	10.9	16.7	Differential Rate pH change
	mmol/l	14.1	11.2	17.0	Enzymatic
	mmol/l	13.7	10.9	16.5	ISE
	mmol/l	14.4	11.4	17.4	Dry Chemistry
Bile Acids	µmol/l	26.7	21.4	32.0	4th Generation Colorimetric
	µmol/l	24.1	19.3	28.9	5th Generation Colorimetric
Direct Bilirubin	µmol/l	21.2	16.8	25.6	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.983	1.50	
	µmol/l	21.0	16.6	25.4	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.971	1.49	
	µmol/l	11.8	9.3	14.3	Dry Chemistry
	mg/dl	0.690	0.546	0.834	
Total Bilirubin	µmol/l	29.9	23.6	36.2	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	1.38	2.12	
	µmol/l	29.8	23.5	36.1	Diazo with Sulphanilic acid
	mg/dl	1.74	1.37	2.11	
	µmol/l	25.2	19.9	30.5	Dry Chemistry
	mg/dl	1.47	1.16	1.78	
Calcium	mmol/l	2.28	2.05	2.51	Arsenazo III
	mg/dl	9.14	8.22	10.10	
	mmol/l	2.24	2.02	2.46	Cresolphthalein complexone
	mg/dl	8.98	8.10	9.86	
	mmol/l	2.23	2.01	2.45	ISE
	mg/dl	8.94	8.06	9.82	
	mmol/l	2.34	2.11	2.57	Methylthymol blue
	mg/dl	9.38	8.46	10.3	
	mmol/l	2.31	2.08	2.54	Dry Chemistry
	mg/dl	9.26	8.34	10.2	
Chloride	mmol/l	98.4	90.5	106	Colorimetric
mmol/l = mEq/l	mmol/l	96.9	89.2	105	ISE Direct
	mmol/l	94.3	86.8	102	ISE Indirect
	mmol/l	96.5	88.8	104	Dry Chemistry
Cholesterol	mmol/l	4.03	3.50	4.56	Cholesterol Oxidase (CHOD PAP)
	mg/dl	156	135	177	
	mmol/l	3.77	3.28	4.26	Dry Chemistry
	mg/dl	146	127	165	
Copper	µmol/l	16.6	13.3	19.9	Atomic Absorption
	µg/dl	106	84.6	127	
	µmol/l	16.0	12.8	19.2	Colorimetric
	µg/dl	102.0	81.4	123	
Creatinine	µmol/l	119	94.9	143	Alkaline picrate with deproteinization
	mg/dl	1.34	1.07	1.61	
	µmol/l	123	98.4	148	Alkaline picrate without deproteinization
	mg/dl	1.39	1.11	1.67	
	µmol/l	134	107	161	Enzymatic UV
	mg/dl	1.51	1.21	1.81	
	µmol/l	126	101	151	Creatinine PAP method
	mg/dl	1.4	1.14	1.70	
	µmol/l	125	100	150	Jaffe Rate Blanked
	mg/dl	1.41	1.13	1.69	
	µmol/l	12	100	150	Jaffe Rate Blanked Compensated (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	
	µmol/l	124	99	149	Dry Chemistry
	mg/dl	1.40	1.12	1.68	

MEAN OF ALL INSTRUMENTS

COMPONENT	UNITS	TARGET	RANGE LOW	RANGE HIGH	METHOD
Glucose	mmol/l	6.22	5.29	7.15	Glucose dehydrogenase
	mg/dl	112	95.3	129	
	mmol/l	6.15	5.23	7.07	Hexokinase
	mg/dl	111	94.2	128	
	mmol/l	6.01	5.11	6.91	Oxygen electrode
	mg/dl	108	92.1	124	
	mmol/l	6.30	5.35	7.25	Glucose oxidase
	mg/dl	114	96.4	132	
	mmol/l	5.90	5.02	6.78	Dry Chemistry
	mg/dl	106.0	90.5	122	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	Tris Buffer 100mM pH8.5
Iron	µmol/l	20.2	16.5	23.9	Colorimetric with precipitation
	µg/dl	113	92.2	134	(Ferene/Ferrozine Method)
	µmol/l	20.0	16.4	23.6	Colorimetric without precipitation
	µg/dl	112	91.7	132	(Ferene/Ferrozine Method)
	µmol/l	20.3	16.6	24.0	Dry Chemistry
	µg/dl	113.0	92.8	133	
TIBC	µmol/l	44.3	35.0	53.6	Removal of Excess Free Iron
	µg/dl	248	196	300	
	µmol/l	44.2	35.0	53.4	Fe + UIBC (Saturation with Iron)
	µg/dl	247	196	298	
Lactate	mmol/l	1.52	1.24	1.80	Enzymatic Colorimetric
	mg/dl	13.7	11.2	16.2	
Lithium	mmol/l	1.04	0.91	1.17	Flame Photometry
mmol/l = mEq/l	mmol/l	1.07	0.94	1.20	ISE
	mmol/l	1.25	1.10	1.40	Dry Chemistry
Magnesium	mmol/l	0.93	0.82	1.04	Atomic Absorption
	mg/dl	2.25	1.98	2.52	
	mmol/l	0.92	0.81	1.03	Calmagite
	mg/dl	2.23	1.96	2.50	
	mmol/l	0.91	0.80	1.02	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	
	mmol/l	0.90	0.79	1.01	Dry Chemistry
	mg/dl	2.18	1.92	2.44	
NEFA	mmol/l	1.52	1.29	1.75	Colorimetric
Osmolality	mmol/kg	282	225	339	Calculated
	mmol/kg	297	237	357	Freezing Point depression
Phosphorus	mmol/l	1.42	1.21	1.63	Phosphomolybdate Enzymatic
Inorganic	mg/dl	4.40	3.75	5.05	
	mmol/l	1.40	1.19	1.61	Phosphomolybdate reduction UV
	mg/dl	4.34	3.69	4.99	
	mmol/l	1.52	1.29	1.75	Dry Chemistry
	mg/dl	4.71	4.00	5.42	
Potassium	mmol/l	3.95	3.63	4.27	Flame Photometry
mmol/l = mEq/l	mmol/l	3.90	3.59	4.21	ISE Direct
	mmol/l	3.95	3.63	4.27	ISE Indirect
	mmol/l	4.01	3.69	4.33	Dry Chemistry
PSA	µg/l	15.7	11.8	19.6	Roche Elecsys Modular E170
	µg/l	16.2	12.1	20.3	Beckman Access Hybritech (TPSA)
	µg/l	14.5	10.9	18.1	Biomerieux Vidas (TPSA)
	µg/l	13.1	9.84	16.4	Siemens Advia Centaur
	µg/l	13.8	10.4	17.2	Abbott Architect
	µg/l	16.4	12.3	20.5	Ortho Vitros Eci
	µg/l	16.8	12.6	21.0	Roche Cobas 6000
Sodium	mmol/l	138	131	145	ISE Direct
mmol/l = mEq/l	mmol/l	139	132	146	ISE Indirect
	mmol/l	140	133	147	Flame Photometry
	mmol/l	139	132	146	Dry Chemistry

MEAN OF ALL INSTRUMENTS

COMPONENT	UNITS	TARGET	RANGE LOW	RANGE HIGH	METHOD
Total Protein	g/l	58.0	46.4	69.6	Biuret reaction, endpoint
	g/dl	5.80	4.64	6.96	
	g/l	56.5	45.2	67.8	Biuret reaction, kinetic
	g/dl	5.65	4.52	6.78	
	g/l	58.9	47.1	70.7	Biuret reaction, CX4/5/7
	g/dl	5.89	4.71	7.07	
	g/l	57.9	46.3	69.5	Dry Chemistry
	g/dl	5.79	4.63	6.95	
Triglycerides	mmol/l	1.06	0.89	1.23	Lipase/GPO-PAP Color. without
	mg/dl	93.8	78.9	109	Glycerol Correction
	mmol/l	1.01	0.85	1.17	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	75.0	104.0	
	mmol/l	1.16	0.98	1.34	Dry Chemistry
	mg/dl	103.0	86.6	119	
Urea	mmol/l	7.29	6.20	8.38	BUN
	mg/dl	20.5	17.4	23.6	
	mmol/l	7.32	6.22	8.42	Urease, Endpoint
	mg/dl	44.0	37.4	50.6	
	mmol/l	7.29	6.20	8.38	Urease, kinetic
	mg/dl	43.8	37.3	50.3	
	mmol/l	7.53	6.40	8.66	Urease Berthelot
	mg/dl	45.3	38.5	52.1	
	mmol/l	7.16	6.09	8.23	Urease Hypochlorite
	mg/dl	43.0	36.6	49.4	
	mmol/l	6.85	5.82	7.88	Dry Chemistry
	mg/dl	41.2	35.0	47.4	
Uric Acid	mmol/l	0.34	0.30	0.39	Uricase, Catalase 340 nm
	mg/dl	5.76	5.02	6.50	
	mmol/l	0.34	0.30	0.39	Uricase peroxidase, with Ascorbate
	mg/dl	5.78	5.04	6.52	Oxidase, colorimetric
	mmol/l	0.34	0.30	0.38	Uricase peroxidase, without Ascorbate
	mg/dl	5.71	4.97	6.45	Oxidase, colorimetric
	mmol/l	0.35	0.30	0.39	Randox 546 nm/BM Uric Acid plus
	mg/dl	5.86	5.11	6.61	
	mmol/l	0.33	0.29	0.37	Dry Chemistry
	mg/dl	5.53	4.80	6.26	
Zinc	µmol/l	22.0	17.6	26.4	Atomic Absorption
	µg/dl	144	115	173	
	µmol/l	23.7	19.0	28.4	Colorimetric
	µg/dl	155	124	186	
Acid Phosphatase	U/l	14.3	9.58	19.0	1-Naphthyl Phosphate, Kinetic 37°C
(Total)	U/l	19.0	12.7	25.3	1-Naphthyl Phosphate, Kinetic with Pentane Diol Activation 37°C
Acid Phosphatase	U/l	7.17	4.80	9.54	1-Naphthyl Phosphate, Kinetic 37°C
(Prostatic)	U/l	13.6	9.11	18.1	1-Naphthyl Phosphate, Kinetic with Pentane Diol Activation 37°C
ALP	U/l	127	108	146	p-Nitrophenylphosphate, AMP, 37°C
	U/l	99	84	114	p-Nitrophenylphosphate, AMP, 30°C
	U/l	81	69	93	p-Nitrophenylphosphate, AMP, 25°C
	U/l	226	192	260	p-Nitrophenylphosphate, DEA, 37°C
	U/l	176	150	202	p-Nitrophenylphosphate, DEA, 30°C
	U/l	144	123	165	p-Nitrophenylphosphate, DEA, 25°C
	U/l	104	88	120	Dry Chemistry

MEAN OF ALL INSTRUMENTS

COMPONENT	UNITS	TARGET	RANGE		METHOD
			LOW	HIGH	
ALT	U/l	36	29	43	SCE, 37°C
	U/l	27	21	33	SCE, 30°C
	U/l	20	16	24	SCE, 25°C
	U/l	43	34	52	IFCC with Pyridoxal 5 Phosphate, 37°C
	U/l	32	25	39	IFCC with Pyridoxal 5 Phosphate, 30°C
	U/l	24	19	29	IFCC with Pyridoxal 5 Phosphate, 25°C
	U/l	36	29	43	IFCC NO Pyridoxal 5 Phosphate, 37°C
	U/l	27	21	33	IFCC NO Pyridoxal 5 Phosphate, 30°C
	U/l	20	16	24	IFCC NO Pyridoxal 5 Phosphate, 25°C
	U/l	45	36	54	Dry Chemistry
Amylase	U/l	75	64	86	Polymedco Ethylidene Blocked, 37°C
	U/l	102	87	117	Randox EPS Liquid 37°C
	U/l	92	78	106	Siemens Blocked pNPG7 37°C
	U/l	91	78	104	Beckman CX 4/5/7 Maltotetraose 37°C
	U/l	84	71	97	Biomerieux Blocked pNPG7 37°C
	U/l	96	81	111	I.L. Blocked pNPG7 37°C
	U/l	90	77	103	Roche Liquid pNPG7 37°C
	U/l	64	55	73	Dry Chemistry
Pancreatic	U/l	78	66	90	Randox EPS Liquid, 37°C
Amylase	U/l	68	58	78	BM/Roche EPS Liquid, 37ºC
AST	U/l	35	28	42	SCE, 37°C
	U/l	24	19	29	SCE, 30°C
	U/l	17	13	21	SCE, 25°C
	U/l	52	42	62	IFCC with Pyridoxal 5 Phosphate,37°C
	U/l	35	28	42	IFCC with Pyridoxal 5 Phosphate,30°C
	U/l	25	20	30	IFCC with Pyridoxal 5 Phosphate,25°C
	U/l	35	28	42	IFCC NO Pyridoxal 5 Phosphate, 37°C
	U/l	24	19	29	IFCC NO Pyridoxal 5 Phosphate, 30°C
	U/l	17	13	21	IFCC NO Pyridoxal 5 Phosphate, 25°C
	U/l	49	39	59	Dry Chemistry
Cholinesterase	U/l	5750	4600	6900	Colorimetric Butyrylthiocholine 37°C
CK (CPK)	U/l	190	156	224	DGKC, serum start 37°C
	U/l	119	98	140	DGKC, serum start 30°C
	U/l	81	66	96	DGKC, serum start 25°C
	U/l	187	153	221	DGKC, substrate start 37°C
	U/l	117	96	138	DGKC, substrate start 30°C
	U/l	79	65	93	DGKC, substrate start 25°C
	U/l	190	156	224	IFCC 37°C
	U/l	119	98	140	IFCC 30°C
	U/l	81	66	96	IFCC 25°C
	U/l	167	137	197	Dry Chemistry
γ-GT	U/l	52	44	60	Gamma Glutamyl-3-Carboxy-4-nitroanilide, 37°C
	U/l	41	35	47	Gamma Glutamyl-3-Carboxy-4-nitroanilide, 30°C
	U/l	32	27	37	Gamma Glutamyl-3-Carboxy-4-nitroanilide, 30°C
	U/l	57	48	66	IFCC 37°C
	U/l	45	38	52	IFCC 30°C
	U/l	35	30	40	IFCC 25°C
	U/l	47	40	54	Gamma Glutamyl 4 nitroanilide, 37°C
	U/l	37	32	42	Gamma Glutamyl 4 nitroanilide, 30°C
	U/l	29	25	33	Gamma Glutamyl 4 nitroanilide, 25°C
	U/l	60	51	69	Randox Gamma Glutamyl. 3 carboxy-4-nitroanilide, 37°C
	U/l	47	40	54	Randox Gamma Glutamyl. 3 carboxy-4-nitroanilide, 30°C
	U/l	37	31	43	Randox Gamma Glutamyl. 3 carboxy-4-nitroanilide, 25°C
	U/l	68	58	78	Dry Chemistry
GLDH	U/l	17	13	21	DGKC 37°C
	U/l	13	10	16	DGKC 30°C
	U/l	11	8	14	DGKC 25°C

MEAN OF ALL INSTRUMENTS

COMPONENT	UNITS	TARGET	RANGE LOW	RANGE HIGH	METHOD
α-HBDH	U/l	260	205	315	DGKC 37°C
	U/l	196	155	237	DGKC 30°C
	U/l	147	116	178	DGKC 25°C
LAP	U/l	17	14	20	NAGEL 37°C
LDH	U/l	427	363	491	P→L, DGKC, 37°C
	U/l	308	262	354	P→L, DGKC, 30°C
	U/l	216	184	248	P→L, DGKC, 25°C
	U/l	475	403	547	P→L, SCE 37°C
	U/l	343	291	395	P→L, SCE 30°C
	U/l	241	204	278	P→L, SCE 25°C
	U/l	434	369	499	P→L, SFBC 37°C
	U/l	313	266	360	P→L, SFBC 30°C
	U/l	220	187	253	P→L, SFBC 25°C
	U/l	217	185	249	L→P IFCC 37°C
	U/l	157	134	180	L→P IFCC 30°C
	U/l	110	94	126	L→P IFCC 25°C
	U/l	195	166	224	L→P 37°C
	U/l	141	120	162	L→P 30°C
	U/l	99	84	114	L→P 25°C
	U/l	621	528	714	Dry Chemistry
Lipase	U/l	39	31	47	Colorimetric 37°C
	U/l	167	134	200	Turbidimetric with Colipase 37°C
Cortisol	nmol/l	489	367	611	Roche Cobas E411
	µg/dl	17.6	13.2	22.0	
Digoxin	nmol/l	2.19	1.75	2.63	Immunoturbidimetric
	ng/ml	1.71	1.37	2.05	
Folate	nmol/l	35.8	27.2	44.4	Roche Cobas E411
	ng/ml	15.8	12.0	19.6	
Gentamycin	mg/l	3.54	2.83	4.25	Immunoturbidimetric
Paracetamol	mg/l	11.0	8.78	13.2	Colorimetric
Salicylate	mg/dl	5.22	4.17	6.27	Enzymatic
Theophylline	mg/dl	0.505	0.404	0.606	Immunoturbidimetric
Tobramycin	µg/dl	262	210	314	Immunoturbidimetric
Apolipoprotein A-1	mg/dl	106	86.9	125	Immunoturbidimetric
Apolipoprotein B-1	mg/dl	60.9	49.9	71.9	Immunoturbidimetric
IgA	g/l	1.81	1.36	2.26	Immunoturbidimetric
IgG	g/l	6.73	5.52	7.94	Immunoturbidimetric
IgM	g/l	0.62	0.50	0.75	Immunoturbidimetric
Thyroxine	nmol/l	86.6	64.9	108	Abbott Architect
	µg/dl	6.75	5.06	8.44	
Free Thyroxine (FreeT_4)	pmol/l	18.1	13.6	22.6	Abbott Architect
	pg/ml	14.1	10.6	17.6	
Triiodothyronine	nmol/l	2.60	1.95	3.25	Abbott Architect
	ng/ml	1.69	1.27	2.11	
Transferrin	g/l	1.96	1.57	2.35	Immunoturbidimetric
Thyroid Stimulating Hormone (TSH)	µIU/ml	1.05 523	0.84 418	1.26 628	Abbott Architect
Vitamin B_{12}	pmol/l	523	418	628	Roche Cobas E411
	pg/ml	709	566	852	
Electrophoresis					Beckman Capillary
Albumin		65.3	58.8	71.8	% of total Protein
Globulin		34.7	31.2	38.2	% of total Protein
α-1-globulin		6.3	4.8	7.8	% of total Protein
α-2-globulin		6.7	5.1	8.3	% of total Protein
β-globulin		9.6	7.3	11.9	% of total Protein
γ-globulin		12.1	9.2	15.0	% of total Protein

SIEMENS DIMENSION®

COMPONENT	UNITS	TARGET	RANGE LOW	RANGE HIGH	METHOD
Albumin	g/l	41.3	35.1	47.5	Bromocresol Purple
	g/dl	4.13	3.51	4.75	
Direct Bilirubin	µmol/l	13.8	10.9	16.7	Diazo with Sulphanilic acid
	mg/dl	0.807	0.638	0.976	
Total Bilirubin	µmol/l	29.7	23.5	35.9	Diazo with Sulphanilic acid
	mg/dl	1.74	1.37	2.11	
Calcium	mmol/l	2.18	1.96	2.40	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	
Chloride mmol/l = mEq/l	mmol/l	93.9	86.4	101	ISE
Cholesterol	mmol/l	3.35	2.91	3.79	Cholesterol Oxidase(CHODPAP)
	mg/dl	129	112	146	
Creatinine	µmol/l	135	108	162	Alkaline picrate without deproteinization
	mg/dl	1.53	1.22	1.84	
Glucose	mmol/l	6.24	5.30	7.18	Hexokinase
	mg/dl	112	95.5	129	
Iron	µmol/l	18.8	15.4	22.2	Colorimetric without precipitation, (Ferrozine/Ferene)
	µg/dl	105.0	86.1	124	
Magnesium	mmol/l	0.88	0.77	0.99	Methylthymol Blue
	mg/dl	2.14	1.88	2.40	
Phosphorus Inorganic	mmol/l	1.39	1.19	1.59	Phosphomolybdate reduction UV
	mg/dl	4.31	3.69	4.93	
Potassium mmol/l = mEq/l	mmol/l	3.89	3.57	4.21	ISE
Sodium mmol/l = mEq/l	mmol/l	139	132	146	ISE
Total Protein	g/l	59.3	47.4	71.2	Biuret reaction, endpoint
	g/dl	5.93	4.74	7.12	
Triglycerides	mmol/l	0.99	0.84	1.15	Lipase/Glycerol Dehydrogenase
	mg/dl	88.0	73.9	102.0	
Urea	mmol/l	7.44	6.32	8.56	BUN.
	mg/dl	20.9	17.8	24.0	
Uric Acid	mmol/l	0.34	0.29	0.38	Uricase peroxidase, Colorimetric
	mg/dl	5.66	4.92	6.40	
ALP	U/l	108	92	124	p-Nitrophenylphosphate, AMP, 37°C
ALT	U/l	44	35	53	IFCC with Pyridoxal 5 Phosphate, 37°C
Amylase	U/l	99	84	114	CNPG 37°C
AST	U/l	48	38	58	IFCC with Pyridoxal 5 Phosphate,37°C
CK (CPK)	U/l	180	147	213	Modified Oliver/Rosalki 37°C
γ-GT	U/l	62	53	71	Modified IFCC 37°C
LDH	U/l	222	189	255	L→P 37°C

POLYCHEM®

COMPONENT/	UNITS	TARGET	RANGE LOW	RANGE HIGH	METHOD
Albumin	g/l	39.5	33.6	45.4	Bromocresol Green
	g/dl	3.95	3.36	4.54	
Bicarbonate	mmol/l	12.7	7.7	17.7	Enzymatic
Direct Bilirubin	µmol/l	21.6	17.1	26.1	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	
Total Bilirubin	µmol/l	33.3	26.3	40.3	Diazo with Sulphanilic acid
	mg/dl	1.95	1.54	2.36	
Calcium	mmol/l	2.32	2.09	2.55	Cresolphthalein complexone
	mg/dl	9.30	8.38	10.2	
Chloride mmol/l = mEq/l	mmol/l	93.2	85.7	101	ISE Direct
Cholesterol	mmol/l	4.01	3.49	4.53	Cholesterol Oxidase (CHOD PAP)
	mg/dl	155	135	175	
Creatinine	µmol/l	121	96.8	145	Alkaline picrate without deproteinization
	mg/dl	1.37	1.09	1.65	
Glucose	mmol/l	6.33	5.38	7.28	Hexokinase
	mg/dl	114	96.9	131	
	mmol/l	6.44	5.48	7.40	Glucose oxidase/GOD-PAP
	mg/dl	116	98.7	133	
Iron	µmol/l	20.5	16.8	24.2	Colorimetric without precipitation,
	µg/dl	115	93.9	136	(Ferene/Ferrozine Method)
Magnesium	mmol/l	0.94	0.83	1.05	Xylidyl Blue
	mg/dl	2.28	2.01	2.55	
Phosphorus Inorganic	mmol/l	1.44	1.22	1.66	Phosphomolybdate reduction UV
	mg/dl	4.46	3.78	5.14	
Potassium mmol/l = mEq/l	mmol/l	3.96	3.64	4.28	ISE Direct
Sodium mmol/l = mEq/l	mmol/l	139	132	146	ISE Direct
Total Protein	g/l	59.5	47.6	71.4	Biuret reaction, endpoint
	g/dl	5.95	4.76	7.14	
Triglycerides	mmol/l	1.08	0.91	1.25	Lipase/GPO-PAP Color. without
	mg/dl	95.6	80.4	111	Glycerol Correction
Urea	mmol/l	7.34	6.24	8.44	Urease, kinetic
	mg/dl	44.1	37.5	50.7	
	mmol/l	7.34	6.24	8.44	BUN.
	mg/dl	20.6	17.5	23.7	
Uric Acid	mmol/l	0.35	0.31	0.40	Randox 546 nm/BM/Roche Uric Acid plus
	mg/dl	5.91	5.14	6.68	
ALP	U/l	126	107	145	p-Nitrophenylphosphate, AMP, 37°C
	U/l	226	192	260	p-Nitrophenylphosphate, DEA, 37°C
ALT	U/l	38	30	46	IFCC NO Pyridoxal 5 Phosphate, 37°C
Amylase	U/l	102	87	117	Randox EPS Liquid 37°C
AST	U/l	39	31	47	IFCC NO Pyridoxal 5 Phosphate, 37°C
CK (CPK)	U/l	188	154	222	DGKC, substrate start 37°C
γ-GT	U/l	60	51	69	Gamma Glutamyl-3-Carboxy-4-nitroanilide, 37°C
LDH	U/l	422	359	485	P→L, DGKC, 37°C
	U/l	223	190	256	L→P 37°C

MEDTEST DX
A MEDTEST COMPANY

Chemistry Control Level 1
For SPOTCHEM™ EZ

Lot Number: 941UN, Exp. Date: 2018-06

Component		Target		Range	Unit
Albumin		3.9		3.3-4.5	g/dl
ALP		152		106-198	U/L
ALT		25		20-30	U/L
Amylase		102		71-133	U/L
AST		28		22-34	U/L
BUN		22		18-26	mg/dl
Calcium		9.0		7.7-10.4	mg/dl
Cholesterol		150		120-180	mg/dl
CPK		139		97-181	U/L
Creatinine		1.31		0.89-1.73	mg/dl
GGT		67		47-87	U/L
Glucose		115		98-132	mg/dl
HDL-Cholesterol		36		25-47	mg/dl
LDH		160		128-192	U/L
Magnesium		2.3		1.7-2.9	mg/dl
Phosphorus		4.5		3.8-5.2	mg/dl
Total Bilirubin		1.5		1.1-1.9	mg/dl
Total Protein		5.7		4.6-6.8	g/dl
Triglyceride		86		65-108	mg/dl
Uric Acid		5.5		4.6-6.4	mg/dl

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