LIQUID CHEMISTRY PREMIUM PLUS - LEVEL 1 (LIQ CHEM PREMIUM PLUS 1)

Cat. No. LUL 5069 **Size:** 12 x 5 ml

** TYPICAL VALUES **

INTENDED USE
This product is intended for *in vitro* diagnostic use, as an unassayed control to monitor laboratory precision on clinical chemistry systems.

DEVICE DESCRIPTION
The unassayed chemistry controls are supplied at 3 levels, level 1, 2 and 3.

SAFETY PRECAUTIONS AND WARNINGS
For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

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.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY
OPENED: Store refrigerated (+2°C to + 8°C). Thawed serum is stable for 7 days at +2°C to +8°C, with the following exceptions: Troponin T is stable for 3 days at +2°C to +8°C. Only the required amount of product should be removed. After use, any residual product should NOT BE RETURNED to the original vial.

UNOPENED: Store frozen at –20°C to –70°C. Stable to expiration date printed on individual vials (see Limitations).

LIMITATIONS
For Total & 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 after thawing. After stabilisation, Total & Prostatic Acid Phosphatase is stable for 7 days at +2°C to +8°C.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark.
ALT, Total Acid Phosphatase, Alkaline Phosphatase, Total and Direct Bilirubin values may gradually decrease during the products shelf life.
Bacterial contamination of the thawed serum will cause reductions in the stability of many components.
The control should not be used as a calibration material.

PREPARATION
1. Allow the frozen control to thaw at room temperature (+15°C to +25°C) until completely thawed. Swirl the contents to ensure homogeneity.
2. Refer to the Control section of the individual analyser application.
3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

MATERIALS PROVIDED
Liquid Chemistry Premium Plus - Level 1 12 x 5 ml

MATERIALS REQUIRED BUT NOT PROVIDED
Not applicable.

Rev. 12 Apr '16 ne

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**** TYPICAL VALUES ****

Analyte	unit	Target	methods
Albumin (electrophoresis)	%	41.1	Electrophoresis
alpha-1-globulin (electrophoresis)	%	29.9	Electrophoresis
alpha-2-globulin (electrophoresis)	%	6.5	Electrophoresis
beta-globulin (electrophoresis)	%	9.1	Electrophoresis
gamma-globulin (electrophoresis)	%	13.4	Electrophoresis
alpha-HBDH	U/l	56	Phosphate buffer DGKC 37°C
	U/l	42	Phosphate buffer DGKC 30°C
	U/l	32	Phosphate buffer DGKC 25°C
Acid Phosphatase (Prostatic)	U/l	6.62	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	12.6	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	21.6	Bromocresol Green
	g/dl	2.16	
Alkaline Phosphatase	U/l	53	Diethanolamine buffer DEA 37°C
	U/l	41	Diethanolamine buffer DEA 30°C
	U/l	34	Diethanolamine buffer DEA 25°C
Alpha-1-Acid Glycoprotein	g/l	0.25	Immunoturbidimetric
Alpha-1-Antitrypsin	g/l	0.46	Immunoturbidimetric
Alphafoetoprotein	KIU/l = IU/ml	1.27	Chemiluminescence
	ng/ml	1.54	
ALT (GPT)	U/l	38	Tris buffer without P5P 37°C
	U/l	28	Tris buffer without P5P 30°C
	U/l	21	Tris buffer without P5P 25°C
Amikacin	µmol/l	5.98	Enzyme Immunoassay
	µg/ml	3.50	
Amylase Pancreatic	U/l	35	Randox EPS Liquid 37°C
Amylase Total	U/l	49	Randox EPS Liquid 37°C
Apolipoprotein A-1	g/l	0.65	Immunoturbidimetric
	mg/dl	65.1	
Apolipoprotein B	g/l	0.40	Immunoturbidimetric
	mg/dl	40.0	
AST (GOT)	U/l	39	Tris buffer without P5P 37°C
	U/l	26	Tris buffer without P5P 30°C
	U/l	19	Tris buffer without P5P 25°C
Beta-2-microglobulin	µg/ml = mg/l	1.60	Immunoturbidimetric
Bicarbonate	mmol/l	9.94	Enzymatic
Bile Acids	µmol/l	18.4	5th Generation Colorimetric
Bilirubin Direct	µmol/l	9.20	Diazo with Sulphanilic Acid
	mg/dl	0.54	
Bilirubin Total	µmol/l	18.4	Diazo with Sulphanilic Acid
	mg/dl	1.08	
C-Reactive Protein	mg/l	1.29	Immunoturbidimetric

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**** TYPICAL VALUES ****

Analyte	unit	Target	methods
Caeruloplasmin	g/l	0.171	Immunoturbidimetric
Caffeine	µmol/l	18.4	Enzyme Immunoassay
	µg/ml	3.57	
Calcium	mmol/l	1.73	Cresolphthalein complexone
	mg/dl	6.93	
	mmol/l	0.87	Ionised calcium
	mg/dl	3.47	
Carbamazepine	µmol/l	21.7	Immunoturbidimetric
	µg/ml	5.13	
Carcinoembryonic Antigen (CEA)	ng/ml = µg/l	0.60	Chemiluminescence
Chloride	mmol/l	80.6	ISE indirect
Cholesterol	mmol/l	3.46	Cholesterol Oxidase
	mg/dl	134	
Cholinesterase	U/l	3335	Colorimetric 37°C
CK Total	U/l	55	Phosphate buffer DGKC 37°C
	U/l	34	Phosphate buffer DGKC 30°C
	U/l	23	Phosphate buffer DGKC 25°C
Complement C3	g/l	0.63	Immunoturbidimetric
Complement C4	g/l	0.13	Immunoturbidimetric
Copper	µmol/l	13.9	Colorimetric
	µg/dl	88.4	
Cortisol	nmol/l	215	Chemiluminescence
	µg/dl	7.74	
Creatinine	µmol/l	80.0	Alkaline picrate no deproteinization
	mg/dl	0.90	
D-3-Hydroxybutyrate	mmol/l	0.18	Enzymatic
DHEA-S	µmol/l	3.70	Chemiluminescence
Digoxin	nmol/l	0.60	Immunoturbidimetric
	ng/ml	0.47	
Ethanol	mg/dl	45.3	Enzymatic Colorimetric
Ferritin	ng/ml = µg/l	23.2	Immunoturbidimetric
Folate	nmol/l	7.22	Chemiluminescence
	ng/ml	3.18	
Free T3	pmol/l	4.26	Chemiluminescence
	ng/dl	0.28	
	pg/ml	2.77	
Free Thyroxine (FT4)	pmol/l	11.8	Chemiluminescence
	pg/ml	9.23	
FSH	mU/ml	8.10	Chemiluminescence
Gentamicin	µmol/l	4.72	Immunoturbidimetric
	µg/ml	2.26	
gamma-GT	U/l	31	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	24	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	19	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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GLDH	U/l	16	DGKC 37°C
	U/l	13	DGKC 30°C
	U/l	10	DGKC 25°C
Glucose	mmol/l	2.77	Glucose oxidase
	mg/dl	49.9	
Growth Hormone (GH)	µU/ml	1.44	Chemiluminescence
Haptoglobin	g/l	0.45	Immunoturbidimetric
HDL - Cholesterol	mmol/l	1.57	Direct Clearance Method
	mg/dl	60.6	
Immunoglobulin A	g/l	1.11	Immunoturbidimetric
Immunoglobulin E	KIU/l = IU/ml	100	Immunoturbidimetric
Immunoglobulin G	g/l	6.76	Immunoturbidimetric
Immunoglobulin M	g/l	0.54	Immunoturbidimetric
Iron	µmol/l	14.9	Colorimetric without ppt.
	µg/dl	83.3	
Lactate	mmol/l	0.55	Enzymatic Colorimetric
	mg/dl	4.96	
LAP	U/l	16	NAGEL 37°C
LD (LDH)	U/l	97	Phosphate buffer DGKC 37°C
	U/l	70	Phosphate buffer DGKC 30°C
	U/l	49	Phosphate buffer DGKC 25°C
LDL - Cholesterol	mmol/l	1.32	Direct Clearance Method
	mg/dl	51.0	
Lipase	U/l	24	Randox Colorimetric 37°C
Lipoprotein (a)	mg/dl	9.60	Immunoturbidimetric
	nmol/L	21.7	
Lithium	mmol/l	0.42	Colorimetric
	mg/dl	0.29	
Luteinising Hormone (LH)	mU/ml	4.80	Chemiluminescence
Magnesium	mmol/l	0.46	Xylidyl Blue
	mg/dl	1.12	
Myoglobin	ng/ml	46.8	Immunoturbidimetric
Osmolality	mmol/kg	581	Freezing point depression
Paracetamol	mmol/l	0.11	Colorimetric
	mg/l	16.6	
Phenobarbital	µmol/l	29.1	Immunoturbidimetric
	µg/ml	6.75	
Phenytoin	µmol/l	23.8	Immunoturbidimetric
	µg/ml	6.01	
Phosphate Inorganic	mmol/l	0.76	Phosphomolybdate UV
	mg/dl	2.36	

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Analyte	unit	Target	methods
Potassium	mmol/l	2.62	ISE indirect
Prealbumin	g/l	0.11	Immunoturbidimetric
Progesterone	nmol/l	2.81	Chemiluminescence
	ng/ml	0.88	
Prolactin	µU/ml	91.1	Chemiluminescence
Protein Total	g/l	47.1	Biuret reaction end point
	g/dl	4.71	
Salicylate	mmol/l	0.39	Colorimetric Trinder
	mg/dl	5.38	
Sodium	mmol/l	114	ISE indirect
T Uptake	%U	51.9	Siemens Immulite 1000
Testosterone	nmol/l	1.75	Chemiluminescence
	ng/ml	0.50	Chemiluminescence
	ng/dl	50.4	Chemiluminescence
Theophylline	µmol/l	29.1	Immunoturbidimetric
	µg/ml	5.24	
Thyroid Stimulating Hormone	µU/ml = mIU/l	0.96	Chemiluminescence
Thyroxine (T4)	nmol/l	42.0	Chemiluminescence
	µg/dl	3.28	Chemiluminescence
	ng/ml	32.8	Chemiluminescence
TIBC	µmol/l	36.6	FE+UIBC(saturation with iron)
	µg/dl	205	
Total Beta hCG	mU/ml	4.48	Chemiluminescence
Transferrin	g/l	1.24	Immunoturbidimetric
Triglycerides	mmol/l	1.42	Enzymatic Colorimetric
	mg/dl	126	
Triiodothyronine (T3)	nmol/l	0.91	Chemiluminescence
	ng/ml	0.59	Chemiluminescence
	ng/dl	59.2	Chemiluminescence
Troponin T	pg/ml	18.0	Chemiluminescence
UIBC	µmol/l	21.7	TIBC - FE
	µg/dl	121	
Urea	mmol/l	2.91	Enzymatic
	mg/dl	17.5	
	mmol/l	2.91	BUN
	mg/dl	8.20	
Uric Acid (Urate)	mmol/l	0.14	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	2.34	
Valproic Acid	µmol/l	229	Immunoturbidimetric
	µg/ml	33.0	
Vancomycin	µmol/l	1.95	Polarisation Fluoroimmunoassay
	µg/ml	2.90	
Vitamin B12	pmol/l	124	Chemiluminescence
	pg/ml	168	

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Analyte	unit	Target	methods
Zinc	µmol/l	13.7	Colorimetric
	µg/dl	89.5	