

LIQUID ASSAYED CHEMISTRY CONTROL PREMIUM PLUS - LEVEL 2 (LIQ CHEM ASY PREMIUM PLUS 2)

CAT. NO. LAN4214 **LOT NO.** 1272UN
SIZE: 12 x 5 ml **EXPIRY:** 2019-12-28
GTIN: 05055273214536

INTENDED USE

This product is intended for *in vitro* diagnostic use, in the quality control of diagnostic assays. The Liquid Assayed Chemistry Control Premium Plus is for the control of accuracy.

DEVICE DESCRIPTION

The Liquid Assayed Chemistry Control Premium Plus is supplied at 3 levels, level 1, 2 and 3. Target values and ranges are supplied for the analytes listed in the values section at all three levels.

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 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 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 and Lipase values may gradually decrease during the product's 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 Assayed Chemistry Control Premium Plus - Level 2 12 x 5 ml

MATERIALS REQUIRED BUT NOT PROVIDED

None

ASSIGNED VALUES

Each lot of serum is submitted to a number of external laboratories. Values are assigned from a consensus of results obtained by these laboratories and internal testing conducted at Randox Laboratories Ltd. With each batch, a control range is provided for individual parameters and each parameter method.

If an instrument specific value is not available, refer to the Mean of all Instruments section. If necessary, contact Randox Laboratories - Customer Technical Services, Northern Ireland, Tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

28 Mar '18 ne

Beckman Coulter AU Series® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	117	99	135	9.00	18.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	106	85	127	10.50	21.00	Tris buffer with P5P 37°C
Amylase Pancreatic	U/l	101	86	116	7.50	15.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	143	122	164	10.50	21.00	Beckman Coulter - blocked pNPG7 37°C
Apolipoprotein A-1	g/l	1.78	1.46	2.10	0.16	0.32	Immunoturbidimetric
	mg/dl	178	146	210	16.00	32.00	
Apolipoprotein B	g/l	0.93	0.76	1.09	0.08	0.17	Immunoturbidimetric
	mg/dl	92.5	75.9	109	8.30	16.60	
AST (GOT)	U/l	122	98	146	12.00	24.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	15.6	12.4	18.9	1.62	3.24	Diazo with Sulphanilic Acid
	mg/dl	0.915	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	54.5	43.1	65.9	5.70	11.40	Diazo with Sulphanilic Acid
	mg/dl	3.19	2.52	3.86	0.34	0.67	
C-Reactive Protein	mg/l	20.1	16.1	24.1	2.00	4.00	Immunoturbidimetric
Calcium	mmol/l	2.28	2.05	2.50	0.11	0.23	Arsenazo III
	mg/dl	9.12	8.22	10.0	0.45	0.90	
Chloride	mmol/l	95.7	88.0	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	5.13	4.46	5.80	0.34	0.67	Cholesterol Oxidase
	mg/dl	198	172	224	13.00	26.00	

Beckman Coulter AU Series® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholinesterase	U/l	7075	5660	8490	707.50	1415.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	229	188	270	20.50	41.00	CK-NAC (IFCC) 37°C
Complement C3	g/l	1.44	1.15	1.73	0.15	0.29	Immunoturbidimetric
	mg/dl	144	115	173	14.50	29.00	
Complement C4	g/l	0.28	0.22	0.34	0.03	0.06	Immunoturbidimetric
	mg/dl	28.0	22.4	33.6	2.80	5.60	
Creatinine	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	74	63	85	5.50	11.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.49	6.37	8.61	0.56	1.12	Hexokinase
	mg/dl	135	115	155	10.00	20.00	
HDL - Cholesterol	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL PPD
	mg/dl	59.4	50.6	68.2	4.40	8.80	
Immunoglobulin A	g/l	2.50	1.88	3.12	0.31	0.62	Immunoturbidimetric
	mg/dl	250	188	312	31.00	62.00	
Immunoglobulin G	g/l	12.4	10.1	14.6	1.13	2.25	Immunoturbidimetric
	mg/dl	1235	1010	1460	112.50	225.00	
Immunoglobulin M	g/l	0.98	0.78	1.17	0.10	0.20	Immunoturbidimetric
	mg/dl	97.7	78.2	117	9.75	19.50	
LD (LDH)	U/l	137	116	158	10.50	21.00	L->P 37°C
LDL - Cholesterol	mmol/l	3.37	2.86	3.88	0.26	0.51	Selective detergent methods
	mg/dl	130	110	150	10.00	20.00	
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lipoprotein(a)	mg/dl	13.9	11.1	16.7	1.40	2.80	Immunoturbidimetric
Magnesium	mmol/l	1.00	0.88	1.12	0.06	0.12	Xylidyl Blue
	mg/dl	2.43	2.14	2.72	0.15	0.29	

Beckman Coulter AU Series® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.16	0.98	1.33	0.09	0.17	Phosphomolybdate UV
	mg/dl	3.58	3.04	4.12	0.27	0.54	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE indirect
Prealbumin	g/l	0.27	0.22	0.33	0.03	0.05	Immunoturbidimetric
	mg/dl	27.1	21.7	32.5	2.70	5.40	
Protein Total	g/l	67.3	53.8	80.8	6.75	13.50	Biuret reaction end point
	g/dl	6.73	5.38	8.08	0.68	1.35	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE indirect
Transferrin	g/l	2.66	2.13	3.19	0.27	0.53	Immunoturbidimetric
	mg/dl	266	213	319	26.50	53.00	
Triglycerides	mmol/l	2.49	2.09	2.89	0.20	0.40	Lipase/GPO-PAP no correction
	mg/dl	220	185	255	17.50	35.00	
Urea	mmol/l	9.88	8.40	11.4	0.74	1.48	Urease kinetic
	mg/dl	59.4	50.5	68.3	4.45	8.90	
	mmol/l	9.88	8.40	11.4	0.74	1.48	BUN
	mg/dl	27.7	23.5	31.9	2.10	4.20	
Uric Acid (Urate)	mmol/l	0.27	0.23	0.30	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	4.52	3.93	5.11	0.30	0.59	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	12.9	8.64	17.2	2.13	4.26	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	121	103	139	9.00	18.00	AMP optimised to IFCC 37°C
	U/l	94	80	108	7.00	14.00	AMP optimised to IFCC 30°C
	U/l	77	66	88	5.50	11.00	AMP optimised to IFCC 25°C
	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	160	136	184	12.00	24.00	Diethanolamine buffer DEA 25°C
Alpha-1-Acid Glycoprotein	g/l	0.65	0.52	0.78	0.07	0.13	Immunoturbidimetric
	mg/dl	65.2	52.2	78.2	6.50	13.00	
Alphafoetoprotein	KIU/l =	2.01	1.61	2.41	0.20	0.40	Roche Cobas E411
	ng/ml	2.43	1.95	2.91	0.24	0.48	
ALT (GPT)	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 37°C
	U/l	81	64	98	8.50	17.00	Tris buffer without P5P 30°C
	U/l	61	49	73	6.00	12.00	Tris buffer without P5P 25°C
	U/l	137	110	164	13.50	27.00	Tris buffer with P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer with P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer with P5P 25°C
Amikacin	µmol/l	24.8	19.8	29.8	2.50	5.00	Gravimetric
	µg/ml	14.5	11.6	17.4	1.45	2.90	

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Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Pancreatic	U/l	109	93	125	8.00	16.00	Immuno-inhibition EPS substrate 37°C
	U/l	120	102	138	9.00	18.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	140	119	161	10.50	21.00	Roche liquid stable pNPG7 37°C
	U/l	143	122	164	10.50	21.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	153	130	176	11.50	23.00	Siemens - blocked pNPG7 37°C
	U/l	153	130	176	11.50	23.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	162	138	186	12.00	24.00	Siemens 2-chloro-pNPG3 37°C
	U/l	116	99	133	8.50	17.00	Randox Lyo. Ethylidene pNPG7 37°C
Apolipoprotein A-1	g/l	1.79	1.47	2.11	0.16	0.32	Immunoturbidimetric
	mg/dl	179	147	211	16.00	32.00	
Apolipoprotein B	g/l	0.90	0.74	1.06	0.08	0.16	Immunoturbidimetric
	mg/dl	90.1	73.9	106	8.10	16.20	
AST (GOT)	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 37°C
	U/l	77	62	92	7.50	15.00	Tris buffer without P5P 30°C
	U/l	54	43	65	5.50	11.00	Tris buffer without P5P 25°C
	U/l	177	142	212	17.50	35.00	Tris buffer with P5P 37°C
	U/l	120	96	144	12.00	24.00	Tris buffer with P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer with P5P 25°C
Beta-2-microglobulin	µg/ml =	3.62	2.90	4.34	0.36	0.72	Immunoturbidimetric
Bicarbonate	mmol/l	24.8	19.7	29.9	2.55	5.10	Enzymatic
Bile Acids	µmol/l	27.9	22.3	33.5	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.39	1.10	1.68	0.15	0.29	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	21.1	16.7	25.5	2.20	4.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Modified Jendrassik
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	61.9	48.9	74.9	6.50	13.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	3.62	2.86	4.38	0.38	0.76	
	µmol/l	57.5	45.4	69.6	6.05	12.10	Diazo with Sulphanilic Acid
	mg/dl	3.36	2.66	4.06	0.35	0.70	
	µmol/l	59.8	47.2	72.4	6.30	12.60	Oxidation to Biliverdin/Vanadate
	mg/dl	3.50	2.76	4.24	0.37	0.74	
	µmol/l	61.6	48.7	74.5	6.45	12.90	Diazo with Dichloroaniline (DCA)
	mg/dl	3.60	2.85	4.35	0.38	0.75	
	µmol/l	62.8	49.6	76.0	6.60	13.20	Modified Jendrassik
	mg/dl	3.67	2.90	4.44	0.39	0.77	
C-Reactive Protein	mg/l	20.2	16.2	24.2	2.00	4.00	Immunoturbidimetric
Caeruloplasmin	g/l	0.310	0.248	0.372	0.03	0.06	Immunoturbidimetric
	mg/dl	31.0	24.8	37.2	3.10	6.20	
Caffeine	µmol/l	44.0	33.0	55.0	5.50	11.00	Gravimetric
	µg/ml	8.54	6.41	10.7	1.07	2.13	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	NM-BAPTA
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.35	2.12	2.58	0.12	0.23	Arsenazo III
	mg/dl	9.42	8.50	10.3	0.46	0.92	
	mmol/l	2.25	2.03	2.47	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.02	8.14	9.90	0.44	0.88	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Carbamazepine	µmol/l	38.1	30.5	45.6	3.79	7.57	Gravimetric
	µg/ml	9.00	7.21	10.8	0.90	1.79	
Carcinoembryonic Antigen (CEA)	ng/ml =	1.72	1.38	2.06	0.17	0.34	Roche Cobas E411
Chloride	mmol/l	96.9	89.1	105	3.90	7.80	ISE indirect
	mmol/l	98.0	90.2	106	3.90	7.80	ISE direct
	mmol/l	97.0	89.2	105	3.90	7.80	Colorimetric
Cholesterol	mmol/l	5.24	4.56	5.92	0.34	0.68	Cholesterol Oxidase
	mg/dl	202	176	228	13.00	26.00	
Cholinesterase	U/l	8169	6535	9803	817.00	1634.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	244	200	288	22.00	44.00	CK-NAC (IFCC) 37°C
	U/l	153	125	181	14.00	28.00	CK-NAC (IFCC) 30°C
	U/l	104	85	123	9.50	19.00	CK-NAC (IFCC) 25°C
	U/l	248	203	293	22.50	45.00	CK-NAC substrate start (DGKC) 37°C
	U/l	155	127	183	14.00	28.00	CK-NAC substrate start (DGKC) 30°C
	U/l	105	86	124	9.50	19.00	CK-NAC substrate start (DGKC) 25°C
Complement C3	g/l	1.43	1.14	1.72	0.15	0.29	Immunoturbidimetric
	mg/dl	143	114	172	14.50	29.00	
Complement C4	g/l	0.26	0.21	0.31	0.03	0.05	Immunoturbidimetric
	mg/dl	26.0	20.8	31.2	2.60	5.20	
Copper	µmol/l	19.6	15.7	23.5	1.95	3.90	Colorimetric
	µg/dl	125	99.9	150	12.55	25.10	
Cortisol	nmol/l	520	390	650	65.00	130.00	Roche Cobas E411
	µg/dl	18.7	14.0	23.4	2.35	4.70	
Creatinine	µmol/l	155	124	186	15.50	31.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.75	1.40	2.10	0.18	0.35	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	144	115	173	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.63	1.30	1.96	0.17	0.33	
	μmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.38	0.32	0.44	0.03	0.06	Tris buffer 100mmol pH 8.5
DHEA-S	μmol/l	13.4	10.7	16.1	1.35	2.70	Siemens Immulite 2000
Digoxin	nmol/l	1.65	1.32	1.98	0.17	0.33	Enzyme Immunoassay
	ng/ml	1.29	1.03	1.55	0.13	0.26	
	nmol/l	1.92	1.54	2.30	0.19	0.38	Gravimetric
	ng/ml	1.50	1.20	1.80	0.15	0.30	
Ferritin	ng/ml =	61.6	49.3	73.9	6.15	12.30	Immunoturbidimetric
Folate	nmol/l	8.46	6.43	10.5	1.02	2.03	Roche Cobas 6000/8000
	ng/ml	3.73	2.84	4.62	0.45	0.89	
Free T3	pmol/l	8.26	6.20	10.3	1.03	2.06	Roche Cobas E411
	ng/dl	0.537	0.403	0.671	0.07	0.13	Roche Cobas E411
	pg/ml	5.38	4.04	6.72	0.67	1.34	Roche Cobas E411
Free T4	pmol/l	20.4	15.3	25.5	2.55	5.10	Roche Cobas E411
	ng/dl	1.59	1.19	1.99	0.20	0.40	Roche Cobas E411
	pg/ml	15.9	11.9	19.9	2.00	4.00	Roche Cobas E411
FSH	mU/ml	14.3	11.4	17.2	1.45	2.90	Roche Cobas E411
Gentamicin	μmol/l	12.0	9.60	14.4	1.20	2.40	Gravimetric
	μg/ml	5.74	4.59	6.89	0.58	1.15	
	μmol/l	9.18	7.34	11.0	0.92	1.84	Enzyme Immunoassay
	μg/ml	4.39	3.51	5.27	0.44	0.88	
gamma-GT	U/l	78	66	90	6.00	12.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	82	70	94	6.00	12.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	65	55	75	5.00	10.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	51	43	59	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	24	19	29	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	18	15	21	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	7.67	6.52	8.82	0.58	1.15	Hexokinase
	mg/dl	138	117	159	10.50	21.00	
	mmol/l	7.68	6.53	8.83	0.58	1.15	Glucose oxidase
	mg/dl	138	118	158	10.00	20.00	
HDL - Cholesterol	mmol/l	1.75	1.49	2.01	0.13	0.26	Direct HDL Roche 3rd generation
	mg/dl	67.6	57.5	77.7	5.05	10.10	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL PPD
	mg/dl	59.4	50.6	68.2	4.40	8.80	
	mmol/l	1.59	1.35	1.83	0.12	0.24	Direct Clearance Method
	mg/dl	61.4	52.1	70.7	4.65	9.30	
	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL PEGME
	mg/dl	57.9	49.4	66.4	4.25	8.50	
Immunoglobulin A	g/l	2.38	1.79	2.97	0.30	0.59	Immunoturbidimetric
	mg/dl	238	179	297	29.50	59.00	
Immunoglobulin G	g/l	12.4	10.1	14.6	1.13	2.25	Immunoturbidimetric
	mg/dl	1235	1010	1460	112.50	225.00	
Immunoglobulin M	g/l	1.01	0.81	1.21	0.10	0.20	Immunoturbidimetric
	mg/dl	101	80.8	121	10.10	20.20	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	25.0	20.5	29.5	2.25	4.50	Colorimetric without ppt.
	µg/dl	140	115	165	12.50	25.00	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
	mmol/l	1.47	1.21	1.73	0.13	0.26	UV LDH
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LAP	U/l	25	21	29	2.00	4.00	NAGEL 37°C
LD (LDH)	U/l	272	231	313	20.50	41.00	P->L German methods 37°C
	U/l	196	167	225	14.50	29.00	P->L German methods 30°C
	U/l	138	117	159	10.50	21.00	P->L German methods 25°C
	U/l	137	116	158	10.50	21.00	L->P 37°C
	U/l	99	84	114	7.50	15.00	L->P 30°C
	U/l	69	59	79	5.00	10.00	L->P 25°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 37°C
	U/l	100	85	115	7.50	15.00	L->P IFCC 30°C
LDL - Cholesterol	mmol/l	2.37	2.01	2.73	0.18	0.36	Direct Clearance Method
	mg/dl	91.5	77.6	105	6.95	13.90	
Lipase	U/l	41	33	49	4.00	8.00	Roche Colorimetric 37°C
	U/l	50	40	60	5.00	10.00	Randox Colorimetric 37°C
Lipoprotein(a)	mg/dl	13.9	11.1	16.7	1.40	2.80	Immunoturbidimetric
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Randox Colorimetric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Gravimetric
	mg/dl	0.694	0.611	0.777	0.04	0.08	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lithium	mmol/l	1.10	0.97	1.23	0.07	0.13	Spectrophotometric
	mg/dl	0.764	0.672	0.856	0.05	0.09	
Luteinising Hormone (LH)	mU/ml	13.4	10.7	16.1	1.35	2.70	Roche Cobas E411
Magnesium	mmol/l	1.04	0.92	1.17	0.06	0.13	Xylidyl Blue
	mg/dl	2.53	2.22	2.84	0.16	0.31	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Methylthymol blue
	mg/dl	2.43	2.14	2.72	0.15	0.29	
Myoglobin	ng/ml =	156	109	203	23.50	47.00	Immunoturbidimetric
Osmolality	mOsm/kg	699	559	839	70.00	140.00	Freezing point depression
Paracetamol	mmol/l	0.53	0.42	0.64	0.05	0.11	Gravimetric
	mg/l	80.0	64.0	96.0	8.00	16.00	
	mmol/l	0.47	0.37	0.56	0.05	0.09	Enzymatic
	mg/l	70.6	56.4	84.8	7.10	14.20	
Phenobarbital	µmol/l	120	96.0	144	12.00	24.00	Gravimetric
	µg/ml	27.8	22.3	33.3	2.75	5.50	
Phenytoin	µmol/l	47.5	38.0	57.0	4.75	9.50	Gravimetric
	µg/ml	12.0	9.60	14.4	1.20	2.40	
Phosphate Inorganic	mmol/l	1.18	1.00	1.36	0.09	0.18	Phosphomolybdate UV
	mg/dl	3.66	3.10	4.22	0.28	0.56	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE indirect
	mmol/l	4.26	3.92	4.60	0.17	0.34	ISE direct
Prealbumin	g/l	0.27	0.21	0.32	0.03	0.05	Immunoturbidimetric
	mg/dl	26.7	21.4	32.0	2.65	5.30	
Progesterone	nmol/l	35.1	28.1	42.1	3.50	7.00	Roche Cobas E411
	ng/ml	11.0	8.80	13.2	1.10	2.20	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Prolactin	µU/ml	380	304	456	38.00	76.00	Roche Cobas E411
Protein Total	g/l	69.8	55.8	83.8	7.00	14.00	Biuret reaction end point
	g/dl	6.98	5.58	8.38	0.70	1.40	
PSA Total	ng/ml =	11.9	8.93	14.9	1.49	2.97	Roche Cobas E411
Salicylate	mmol/l	1.00	0.80	1.20	0.10	0.20	Gravimetric
	mg/dl	13.8	11.0	16.6	1.40	2.80	
	mmol/l	0.86	0.69	1.03	0.09	0.17	Colorimetric
	mg/dl	11.9	9.52	14.3	1.19	2.38	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE indirect
	mmol/l	147	140	154	3.50	7.00	ISE direct
	mmol/l	144	137	151	3.50	7.00	Enzymatic
T Uptake	%U	31.0	25.4	36.6	2.80	5.60	Siemens Immulite 2000
Testosterone	nmol/l	17.7	14.1	21.2	1.79	3.57	Roche Cobas E411
	ng/ml	5.09	4.06	6.12	0.52	1.03	Roche Cobas E411
	ng/dl	509	406	612	51.50	103.00	Roche Cobas E411
Theophylline	µmol/l	79.9	63.9	95.9	8.00	16.00	Gravimetric
	µg/ml	14.4	11.5	17.3	1.45	2.90	
	µmol/l	71.0	56.8	85.2	7.10	14.20	Immunoturbidimetric
	µg/ml	12.8	10.2	15.4	1.30	2.60	
Thyroid Stimulating Hormone	µU/ml =	4.24	3.39	5.09	0.43	0.85	Roche Cobas E411
TIBC	µmol/l	64.4	50.9	77.9	6.75	13.50	Randox Direct
	µg/dl	360	285	435	37.50	75.00	
Total Beta hCG	mU/ml=IU	45.0	36.0	54.0	4.50	9.00	Roche Cobas E411
	IU/ml	0.045	0.036	0.054	0.00	0.01	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T3	nmol/l	2.79	2.09	3.49	0.35	0.70	Roche Cobas E411
	ng/ml	1.82	1.36	2.28	0.23	0.46	Roche Cobas E411
	ng/dl	182	136	228	23.00	46.00	Roche Cobas E411
Total T4	nmol/l	102	76.5	128	12.75	25.50	Roche Cobas E411
	µg/dl	7.96	5.97	9.95	1.00	1.99	Roche Cobas E411
	ng/ml	79.6	59.7	99.5	9.95	19.90	Roche Cobas E411
Transferrin	g/l	2.64	2.11	3.17	0.27	0.53	Immunoturbidimetric
	mg/dl	264	211	317	26.50	53.00	
Triglycerides	mmol/l	2.57	2.16	2.98	0.21	0.41	Lipase/GPO-PAP no correction
	mg/dl	227	191	263	18.00	36.00	
Troponin T	ng/ml =	0.25	0.18	0.33	0.04	0.08	Roche Cobas E411
	ng/l = p	254	178	330	38.00	76.00	
UIBC	µmol/l	33.8	27.7	39.9	3.05	6.10	Direct Colorimetric
	µg/dl	189	155	223	17.00	34.00	
Urea	mmol/l	10.3	8.76	11.8	0.77	1.54	Urease kinetic
	mg/dl	61.9	52.6	71.2	4.65	9.30	
	mmol/l	10.3	8.76	11.8	0.77	1.54	BUN
	mg/dl	28.9	24.6	33.2	2.15	4.30	
Uric Acid (Urate)	mmol/l	0.27	0.23	0.30	0.02	0.03	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	4.45	3.88	5.02	0.29	0.57	
	mmol/l	0.27	0.23	0.30	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	4.47	3.88	5.06	0.30	0.59	
Valproic Acid	µmol/l	277	222	332	27.50	55.00	Gravimetric
	µg/ml	40.0	32.0	48.0	4.00	8.00	
Vancomycin	µmol/l	9.89	7.91	11.9	0.99	1.98	Gravimetric
	µg/ml	14.7	11.8	17.6	1.45	2.90	

MEAN OF ALL INSTRUMENTS (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Vitamin B12	pmol/l	415	332	498	41.50	83.00	Roche Cobas E411
	pg/ml	562	450	674	56.00	112.00	
Zinc	µmol/l	24.2	19.4	29.0	2.40	4.80	Colorimetric with deproteinisation
	µg/dl	158	127	189	15.50	31.00	

MEAN OF ALL INSTRUMENTS (Elec.) (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin (electrophoresis)		60.0	54.1	65.9	2.95	5.90	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.3	4.0	6.6	0.64	1.27	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.9	5.2	8.6	0.83	1.66	% of total Protein (Beckman Capillary)
beta-globulin		12.1	9.2	15.0	1.45	2.90	% of total Protein (Beckman Capillary)
gamma-globulin		15.7	11.9	19.5	1.90	3.80	% of total Protein (Beckman Capillary)

ROCHE COBAS SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 37°C
	U/l	71	60	82	5.50	11.00	Roche Integra AMP buffer 30°C
	U/l	58	49	67	4.50	9.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 37°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Amylase Total	U/l	140	119	161	10.50	21.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 37°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 30°C
	U/l	50	40	60	5.00	10.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	23.8	18.9	28.7	2.45	4.90	Enzymatic
Bile Acids	µmol/l	30.0	24.0	36.0	3.00	6.00	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
Bilirubin Total	µmol/l	53.8	42.5	65.1	5.65	11.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	3.15	2.49	3.81	0.33	0.66	
C-Reactive Protein	mg/l	17.0	13.6	20.4	1.70	3.40	Immunoturbidimetric
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	NM-BAPTA
	mg/dl	9.54	8.58	10.5	0.48	0.96	

ROCHE COBAS SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	5.00	4.35	5.65	0.33	0.65	Cholesterol Oxidase
	mg/dl	193	168	218	12.50	25.00	
CK Total	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 37°C
	U/l	151	124	178	13.50	27.00	CK-NAC (IFCC) 30°C
	U/l	103	84	122	9.50	19.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.60	1.29	1.91	0.16	0.31	
Ferritin	ng/ml =	72.3	57.8	86.8	7.25	14.50	Immunoturbidimetric
gamma-GT	U/l	81	69	93	6.00	12.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	64	54	74	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.64	6.49	8.79	0.58	1.15	Hexokinase
	mg/dl	138	117	159	10.50	21.00	
HDL - Cholesterol	mmol/l	1.75	1.49	2.01	0.13	0.26	Direct HDL Roche 3rd generation
	mg/dl	67.6	57.5	77.7	5.05	10.10	
Iron	µmol/l	25.2	20.7	29.7	2.25	4.50	Colorimetric without ppt.
	µg/dl	141	116	166	12.50	25.00	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	283	241	325	21.00	42.00	P->L German methods 37°C
	U/l	204	174	234	15.00	30.00	P->L German methods 30°C
	U/l	143	122	164	10.50	21.00	P->L German methods 25°C
Lipase	U/l	41	33	49	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.10	0.97	1.23	0.07	0.13	Spectrophotometric
	mg/dl	0.764	0.672	0.856	0.05	0.09	

ROCHE COBAS SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.05	0.92	1.18	0.06	0.13	Xylidyl Blue
	mg/dl	2.55	2.25	2.85	0.15	0.30	
Phosphate Inorganic	mmol/l	1.17	1.00	1.35	0.09	0.18	Phosphomolybdate UV
	mg/dl	3.63	3.08	4.18	0.28	0.55	
Potassium	mmol/l	4.19	3.85	4.53	0.17	0.34	ISE indirect
Protein Total	g/l	68.3	54.6	82.0	6.85	13.70	Biuret reaction end point
	g/dl	6.83	5.46	8.20	0.69	1.37	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE indirect
Triglycerides	mmol/l	2.65	2.23	3.07	0.21	0.42	Lipase/GPO-PAP no correction
	mg/dl	235	197	273	19.00	38.00	
UIBC	μmol/l	33.8	27.7	39.9	3.05	6.10	Direct Clearance Method
	μg/dl	189	155	223	17.00	34.00	
Urea	mmol/l	10.2	8.67	11.7	0.77	1.53	Urease kinetic
	mg/dl	61.3	52.1	70.5	4.60	9.20	
	mmol/l	10.2	8.67	11.7	0.77	1.53	BUN
	mg/dl	28.6	24.3	32.9	2.15	4.30	
Uric Acid (Urate)	mmol/l	0.26	0.23	0.29	0.02	0.03	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	4.37	3.80	4.94	0.29	0.57	

RX SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 37°C
	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	120	102	138	9.00	18.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	153	130	176	11.50	23.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	25.9	20.5	31.3	2.70	5.40	Enzymatic
Bile Acids	µmol/l	27.9	22.3	33.5	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	22.0	17.4	26.6	2.30	4.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.29	1.02	1.56	0.14	0.27	
Bilirubin Total	µmol/l	63.4	50.1	76.7	6.65	13.30	Diazo with Sulphanilic Acid
	mg/dl	3.71	2.93	4.49	0.39	0.78	
	µmol/l	59.5	47.0	72.0	6.25	12.50	Oxidation to Biliverdin/Vanadate
	mg/dl	3.48	2.75	4.21	0.37	0.73	
Calcium	mmol/l	2.43	2.19	2.67	0.12	0.24	Arsenazo III
	mg/dl	9.74	8.78	10.7	0.48	0.96	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	ISE direct

RX SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	5.51	4.79	6.23	0.36	0.72	Cholesterol Oxidase
	mg/dl	213	185	241	14.00	28.00	
CK Total	U/l	268	220	316	24.00	48.00	CK-NAC (IFCC) 37°C
	U/l	248	203	293	22.50	45.00	CK-NAC substrate start (DGKC) 37°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
gamma-GT	U/l	82	70	94	6.00	12.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.98	6.78	9.18	0.60	1.20	Hexokinase
	mg/dl	144	122	166	11.00	22.00	
	mmol/l	7.77	6.60	8.94	0.59	1.17	Glucose oxidase
	mg/dl	140	119	161	10.50	21.00	
Iron	µmol/l	26.1	21.4	30.8	2.35	4.70	Colorimetric without ppt.
	µg/dl	146	120	172	13.00	26.00	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	139	118	160	10.50	21.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	P->L German methods 37°C
Lipase	U/l	50	40	60	5.00	10.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Colorimetric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
Magnesium	mmol/l	1.05	0.92	1.18	0.06	0.13	Xylidyl Blue
	mg/dl	2.55	2.25	2.85	0.15	0.30	
Phosphate Inorganic	mmol/l	1.20	1.02	1.38	0.09	0.18	Phosphomolybdate UV
	mg/dl	3.72	3.16	4.28	0.28	0.56	

RX SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	4.26	3.92	4.60	0.17	0.34	ISE direct
Protein Total	g/l	70.7	56.6	84.8	7.05	14.10	Biuret reaction end point
	g/dl	7.07	5.66	8.48	0.71	1.41	
Sodium	mmol/l	147	140	154	3.50	7.00	ISE direct
	mmol/l	144	137	151	3.50	7.00	Enzymatic
TIBC	μmol/l	64.4	50.9	77.9	6.75	13.50	Direct Colorimetric
	μg/dl	360	285	435	37.50	75.00	
Triglycerides	mmol/l	2.57	2.16	2.98	0.21	0.41	Lipase/GPO-PAP no correction
	mg/dl	227	191	263	18.00	36.00	
Urea	mmol/l	10.3	8.76	11.8	0.77	1.54	Urease kinetic
	mg/dl	61.9	52.6	71.2	4.65	9.30	
	mmol/l	10.3	8.76	11.8	0.77	1.54	BUN
	mg/dl	28.9	24.6	33.2	2.15	4.30	
Uric Acid (Urate)	mmol/l	0.27	0.23	0.30	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	4.52	3.93	5.11	0.30	0.59	
	mmol/l	0.25	0.22	0.29	0.02	0.03	Uricase peroxidase no ascorbate oxidase
	mg/dl	4.25	3.70	4.80	0.28	0.55	

SIEMENS ADVIA 1200/1650/1800/2400® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	124	105	143	9.50	19.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	111	89	133	11.00	22.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	116	99	133	8.50	17.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	153	130	176	11.50	23.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	118	94	142	12.00	24.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.18	0.936	1.42	0.12	0.24	
Bilirubin Total	µmol/l	60.1	47.5	72.7	6.30	12.60	Oxidation to Biliverdin/Vanadate
	mg/dl	3.52	2.78	4.26	0.37	0.74	
C-Reactive Protein	mg/l	22.7	18.2	27.2	2.25	4.50	Immunoturbidimetric
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.34	2.11	2.57	0.12	0.23	Arsenazo III
	mg/dl	9.38	8.46	10.3	0.46	0.92	
Cholesterol	mmol/l	5.32	4.63	6.01	0.35	0.69	Cholesterol Oxidase
	mg/dl	205	179	231	13.00	26.00	
CK Total	U/l	246	202	290	22.00	44.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	155	124	186	15.50	31.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.75	1.40	2.10	0.18	0.35	

SIEMENS ADVIA 1200/1650/1800/2400® (LIQ CHEM ASY PREMIUM PLUS 2)
Cat. No. LAN4214 Lot No. 1272UN
Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	80	68	92	6.00	12.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.59	6.45	8.73	0.57	1.14	Glucose oxidase
	mg/dl	137	116	158	10.50	21.00	
	mmol/l	7.63	6.49	8.77	0.57	1.14	Hexokinase
	mg/dl	137	117	157	10.00	20.00	
HDL - Cholesterol	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct Clearance Method
	mg/dl	59.4	50.6	68.2	4.40	8.80	
Iron	µmol/l	25.2	20.7	29.7	2.25	4.50	Colorimetric without ppt.
	µg/dl	141	116	166	12.50	25.00	
LDL - Cholesterol	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct Clearance Method
	mg/dl	95.7	81.4	110	7.15	14.30	
Magnesium	mmol/l	1.05	0.92	1.18	0.06	0.13	Xylidyl Blue
	mg/dl	2.55	2.25	2.85	0.15	0.30	
Phosphate Inorganic	mmol/l	1.17	1.00	1.35	0.09	0.18	Phosphomolybdate UV
	mg/dl	3.63	3.08	4.18	0.28	0.55	
Protein Total	g/l	72.3	57.8	86.8	7.25	14.50	Biuret reaction end point
	g/dl	7.23	5.78	8.68	0.73	1.45	
Triglycerides	mmol/l	2.69	2.26	3.12	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	238	200	276	19.00	38.00	
Urea	mmol/l	10.7	9.10	12.3	0.80	1.60	Urease kinetic
	mg/dl	64.3	54.7	73.9	4.80	9.60	
	mmol/l	10.7	9.10	12.3	0.80	1.60	BUN
	mg/dl	30.0	25.5	34.5	2.25	4.50	
Uric Acid (Urate)	mmol/l	0.27	0.24	0.31	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	4.59	4.00	5.18	0.30	0.59	

SIEMENS DIMENSION SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)
Cat. No. LAN4214 Lot No. 1272UN
Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	115	98	132	8.50	17.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	110	88	132	11.00	22.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	162	138	186	12.00	24.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	24.8	19.7	29.9	2.55	5.10	Enzymatic
Bilirubin Direct	µmol/l	12.9	10.2	15.7	1.37	2.74	Diazo with Sulphanilic Acid
	mg/dl	0.757	0.597	0.917	0.08	0.16	
Bilirubin Total	µmol/l	54.7	43.2	66.2	5.75	11.50	Diazo with Sulphanilic Acid
	mg/dl	3.20	2.53	3.87	0.34	0.67	
C-Reactive Protein	mg/l	22.0	17.6	26.4	2.20	4.40	Turbidimetric
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone (CPC)
	mg/dl	8.77	7.90	9.64	0.44	0.87	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.90	4.26	5.54	0.32	0.64	Dimension-Siemens reagents
	mg/dl	189	164	214	12.50	25.00	
CK Total	U/l	235	193	277	21.00	42.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	146	117	175	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.65	1.32	1.98	0.17	0.33	
Digoxin	nmol/l	1.65	1.32	1.98	0.17	0.33	Enzyme Immunoassay
	ng/ml	1.29	1.03	1.55	0.13	0.26	

SIEMENS DIMENSION SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Gentamicin	µmol/l	9.18	7.34	11.0	0.92	1.84	Turbidimetric
	µg/ml	4.39	3.51	5.27	0.44	0.88	
gamma-GT	U/l	105	89	121	8.00	16.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	7.60	6.46	8.74	0.57	1.14	Hexokinase
	mg/dl	137	116	158	10.50	21.00	
HDL - Cholesterol	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL PEGME
	mg/dl	58.0	49.4	66.6	4.30	8.60	
Iron	µmol/l	23.3	19.1	27.5	2.10	4.20	Colorimetric without ppt.
	µg/dl	130	107	153	11.50	23.00	
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	UV LDH
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	143	122	164	10.50	21.00	Siemens Dimension L-P Non IFCC 37°C
LDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	Selective detergent methods
	mg/dl	95.4	81.1	110	7.15	14.30	
Lipase	U/l	168	135	201	16.50	33.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.00	0.88	1.12	0.06	0.12	Methylthymol blue
	mg/dl	2.42	2.13	2.71	0.15	0.29	
Paracetamol	mmol/l	0.47	0.37	0.56	0.05	0.09	Enzymatic
	mg/l	70.6	56.4	84.8	7.10	14.20	
Phosphate Inorganic	mmol/l	1.19	1.01	1.36	0.09	0.18	Phosphomolybdate UV
	mg/dl	3.68	3.13	4.23	0.28	0.55	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE indirect
Protein Total	g/l	70.2	56.2	84.2	7.00	14.00	Biuret reaction end point
	g/dl	7.02	5.62	8.42	0.70	1.40	

SIEMENS DIMENSION SERIES® (LIQ CHEM ASY PREMIUM PLUS 2)

Cat. No. LAN4214 Lot No. 1272UN

Size: 12 x 5 ml Expiry: 2019-12-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Salicylate	mmol/l	0.86	0.69	1.03	0.09	0.17	Colorimetric
	mg/dl	11.9	9.51	14.3	1.20	2.39	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE indirect
Theophylline	µmol/l	71.0	56.8	85.2	7.10	14.20	Turbidimetric
	µg/ml	12.8	10.2	15.4	1.30	2.60	
Triglycerides	mmol/l	2.45	2.06	2.84	0.20	0.39	Lipase/GPO-PAP no correction
	mg/dl	217	182	252	17.50	35.00	
Urea	mmol/l	10.6	9.01	12.2	0.80	1.59	BUN
	mg/dl	29.7	25.2	34.2	2.25	4.50	
Uric Acid (Urate)	mmol/l	0.27	0.23	0.30	0.02	0.03	Uricase peroxidase no ascorbate oxidase
	mg/dl	4.45	3.88	5.02	0.29	0.57	