



National Public Health Laboratory

Teku, Kathmandu, Nepal

Certificate Number: MLS- 004/1

Issue Date: 11-05-2023

Expiry Date: 10-05-2026

**DISCIPLINE: CLINICAL BIO-CHEMISTRY, CLINICAL PATHOLOGY,
IMMUNOASSAY, HEMATOLOGY, SEROLOGY, BACTERIOLOGY and
MOLECULAR TESTING**

Scope of Accreditation

The clinical laboratories under the scope of AERSSC accreditation (ISO 15189:2022) are:

S No.	Materials or items examined/tested	Specific tests/examination performed	Specification, standard (method) or technique used	Range of testing/Limit of detection	MU
BIOCHEMISTRY					
1	Serum/Plasma	Glucose (mg/dl)	Hexokinase	10 – 800 mg/dl	7.38
2	Serum/Plasma	Urea (mg/dl)	Urease UV	5 – 300 mg/dl	10.58
3	Serum/Plasma/Urine	Creatinine (mg/dl)	Alkaline picrate	0.06 – 25 mg/dl	5.15
4	Serum/Plasma	Uric Acid (mg/dl)	Uricase colorimetric	1.5 – 30 mg/dl	6.50
5	Serum/Plasma	Ca (mg/dl)	Arsenazo III	4 – 20 mg/dl	6.58
6	Serum/Plasma	Phosphorus (mg/dl)	Phosphomolybdate colorimetric endpoint	1 -20 mg/dl	12.79
7	Serum/Plasma	T. Bilirubin (mg/dl)	Jendrassik	0 – 30 mg/dl	5.15
8	Serum/Plasma	D. Bilirubin (mg/dl)	Jendrassik	0 – 10 mg/dl	6.37
9	Serum/Plasma	ALP (U/L)	PNP Amp kinetic	5 – 1500 U/L	8.70
10	Serum/Plasma	GOT/AST (U/L)	UV kinetic with P5P	3 – 1000 U/L	8.23
11	Serum/Plasma	GPT/ALT (U/L)	UV kinetic with P5P	3 – 500 U/L	7.09
12	Serum/Plasma	GGT (U/L)	IFCC	5 – 1200 U/L	8.76

13	Serum/Plasma	LDH (U/L)	LDH (L-P) IFCC	25 – 1200 U/L	15.68
14	Serum/Plasma	T. Protein (g/dl)	Biuret end point method	3 – 12 g/dl	5.25
15	Serum/Plasma	Albumin (g/dl)	BCG	1.5 – 6 g/dl	6.23
16	Serum/Plasma	T. Cholesterol(mg/dl)	CHOD-PAP	20 – 700 mg/dl	4.25
17	Serum/Plasma	HDLCholesterol (mg/dl)	Enzymatic direct	2 – 180 mg/dl	9.97
18	Serum/Plasma	LDLCholesterol (mg/dl)	Direct method	10 – 400 mg/dl	8.70
19	Serum/Plasma	Triglyceride (mg/dl)	Enzymatic endpoint	10 – 1000 mg/dl	7.85
20	Serum/Plasma	CPK NAC (U/L)	NAC activated	10 – 2000 U/L	11.09
21	Serum/Plasma	Amylase (U/L)	ONP-Triose ONPG3	10 – 2000 U/L	7.23
22	Serum/Plasma	Iron	TPTZ without precipitation	10 – 1000 ug/dl	13.07
23	Serum/Plasma	UIBC (ug/dl)	Nitroso- PSAP	55 – 550 ug/dl	9.66
24	Serum	Na+	Direct ISE	20-200 mmol/l	6.99
25	Serum	K+	Direct ISE	0.2-40.0 mmol/l	7.40
26	Whole blood	HbA1c	HPLC	3.8 – 18.5 %	10.9
IMMUNOASSAY					
27	Serum/Plasma	FT3	ECLIA (competitive immunoassay)	0.4-50.0pmol/L	11.6
28	Serum/Plasma	FT4	ECLIA (competitive immunoassay)	0.3-100.0pmol/L	8.369
29	Serum/Plasma	TSH	ECLIA (sandwich immunoassay)	0.005-100.0μIU/ml	28.22
30	Serum/Plasma	A-TPO	ECLIA (competitive immunoassay)	5.00-600.0IU/ml	16.6
31	Serum/Plasma	TG	ECLIA (sandwich immunoassay)	0.04-500.0ng/ml	20.58
32	Serum/Plasma	Vitamin D	ECLIA(competitive immunoassay)	3.00-100.0ng/ml	16.61
33	Serum/Plasma	Vitamin B12	ECLIA(competitive immunoassay)	50.0-2000.0pg/ml	21.46
34	Serum/Plasma	Folate	ECLIA(competitive immunoassay)	0.6-20.0ng/ml	35.28
35	Serum/Plasma	Ferritin	ECLIA (sandwich immunoassay)	0.500-2000μg/L	20.87
36	Serum/Plasma	hGH	ECLIA (sandwich immunoassay)	0.030-50.0ng/ml	6.664
37	Serum/Plasma	Cortisol	ECLIA (competitive immunoassay)	1.5-1750.0nmol/L	22.34
38	Serum/Plasma	E2	ECLIA(competitive immunoassay)	18.4-11010.0pmol/L	33.07

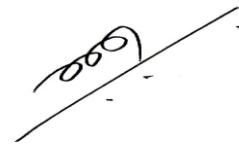
39	Serum/Plasma	Testosterone	ECLIA (competitive immunoassay)	0.025-15.0ng/ml	13.58
40	Serum/Plasma	LH	ECLIA (sandwich immunoassay)	0.100-200mIU/ml	33.81
41	Serum/Plasma	FSH	ECLIA (sandwich immunoassay)	0.100-200mIU/ml	16.17
42	Serum/Plasma	Prolactin	ECLIA (sandwich immunoassay)	1.00-10000.0μIU/ml	33.81
43	Serum/Plasma	CA 125	ECLIA (sandwich immunoassay)	0.6 -5000 U/ml	36.46
44	Serum/Plasma	CA 15-3	ECLIA (sandwich immunoassay)	1.00 – 300 U/ml	9.114
45	Serum/Plasma	CA 19-9	ECLIA (sandwich immunoassay)	0.60 – 1000 U/ml	23.52
46	Serum/Plasma	CEA	ECLIA (sandwich immunoassay)	0.200 1000 ng/ml	18.82
47	Serum/Plasma	Alpha Feto Protein	ECLIA (sandwich immunoassay)	0.50 – 1000 IU/ml	18.23
48	Serum/Plasma	Beta HCG	ECLIA (sandwich immunoassay)	0.10 – 10000 mIU/ml	14.5
49	Serum/Plasma	PSA Total	ECLIA (sandwich immunoassay)	0.006 – 100 ng/ml	26.46
HEAMATOLOGY					
50	Whole blood	WBC	Impedance-MDSS#	0 - 120 10 ³ /μL	4.3
51	Whole blood	RBC	Impedance-MDSS	0 - 8 10 ⁶ /μL	2.9
52	Whole blood	HGB	Photometry-MDSS	0 - 24 g/dL	3.9
53	Whole blood	HCT	Numeric integration	0 - 67 %	2.9
54	Whole blood	PLT	Impedance-MDSS	0 - 1 900 10 ³ /μL	9.4
55	Whole blood	MCV	Calculation	15-210 fl	1.96
56	Whole blood	MCH	Calculation	12-55 pg	3.9
57	Whole blood	MCHC	Calculation	12-55 g/dl	2.74
58	Whole blood	RDW-CV%	Calculation	0-50 %	4.5
59	Whole blood	NE	DHSS*-cytometry & cytochemical association	0-99.9%	NA
60	Whole blood	LY	DHSS*-cytometry & cytochemical association	0-99.9%	NA
61	Whole blood	EOS	DHSS*-cytometry & cytochemical association	0-99.9%	NA
62	Whole blood	MO	DHSS*-cytometry & cytochemical association	0-99.9%	NA

63	Whole blood	BAS	DHSS*-cytometry & cytochemical association	0-99.9%	NA
64	Whole blood	Hemoglobin Electrophoresis	Capillary electrophoresis	-	NA
65	Whole blood	ESR	Westergren's	High limit: 130 mm/hr Lower limit: 1 mm/hrs	
SEROLOGY					
66	Serum/Plasma	Anti HCV quick test	Immunochromatography	NA	
67	Serum/Plasma	HBsAg quick	Immunochromatography	NA	
68	Serum/Plasma	HIV spot quick a. Alere Determine HIV ½. b. Unigold Statpack	Immunochromatography	NA	
69	DBS (EDTA/WholeBlood)	HIV-I qualitative test	HIV-1 Total nucleic acid detection, Real time PCR	300-10,000,000 copies /ml	
70	Plasma (EDTA)	HIV-1 Viral load	HIV-1 RNA Detection, Real timePCR	20-10,000,000 copies/ml	
71	Serum/Plasma	Anti-HBs	ECLIA	<10 IU/l (Not immune to HepatitisB) ≥10 IU/l (Immune to Hepatitis B)	
72	Serum/Plasma	HBsAg	ECLIA	<0.90 (Non-Reactive) ≥0.9 and <1.0 (Borderline) ≥ 1.0 (Reactive)	
73	Serum/Plasma	Anti HCV	ECLIA	0.90 (Non-Reactive) ≥0.9 and <1.0 (Borderline) ≥ 1.0 (Reactive)	
74	Serum/Plasma	HIV-Combi	ECLIA	0.90 (Non-Reactive) ≥0.9 and <1.0 (Borderline) ≥ 1.0 (Reactive)	
75	Serum/Plasma	Anti-HBc Igm	ECLIA	0.90 (Non-Reactive) ≥0.9 and <1.0 (Borderline) ≥ 1.0 (Reactive))	
76	Serum/Plasma	Anti HBe	ECLIA	< 1.0 (Reactive)	

				>1.0 (Non-Reactive)	
77	Serum/Plasma	HbeAg	ECLIA	0.90 (Non-Reactive) ≥0.9 and <1.0 (Borderline) ≥ 1.0 (Reactive)	
78	Serum/Plasma	HAV IgM, Rapid	Immunochromatography	NA	NA
79	Serum/Plasma	HEV IgM, Rapid	Immunochromatography	NA	NA
80	Serum/Plasma	HBeAg Rapid	Immunochromatography	NA	NA
	BACTEROLOGY				
81	Semen	Semen C/S	Conventional	NA	NA
82	Endometrial tissue	Endometrial Fluid Culture	Conventional	NA	NA
83	HVS	Genital Swab C/S	Conventional	NA	NA
84	Pus	Pus AFB Stain	Conventional	NA	NA
85	Endometrial washing	Endometrial Brush Culture	Conventional	NA	NA
86	Eye swab	Eye Swab C/S	Conventional	NA	NA
87	Nasal swab	Nasal Swab C/S	Conventional	NA	NA
88	HVS	Vaginal Swab C/S	Conventional	NA	NA
89	Urethral discharge	Urethral Swab Culture	Conventional	NA	NA
90	Throat swab/ culture growth	Albert Stain	Conventional	NA	NA
91	CSF	CSF AFB	Conventional	NA	NA
92	CSF	CSF Gram Stain	Conventional	NA	NA
93	Urine	Urine Gram Stain	Conventional	NA	NA
94	Pus	Pus Gram Stain	Conventional	NA	NA
95	Throat swab	Throat Gram Stain	Conventional	NA	NA
96	HVS	HVS Gram Stain	Conventional	NA	NA
97	Sputum	Sputum Gram Stain	Conventional	NA	NA
98	All Fluid	Fluid Fungal C/S	Conventional	NA	NA
99	CSF	CSF Fungal C/S	Conventional	NA	NA
100	All Fluid	Fluid AFB	Conventional	NA	NA
101	All Fluid	Fluid Gram Stain	Conventional	NA	NA

102	BAL Fluid	BAL C/S	Conventional	NA	NA
103	BAL Fluid	BAL For Gram Stain	Conventional	NA	NA
104	Endometrial washing	Brush Specimen for Gram Stain	Conventional	NA	NA
105	Tracheal aspiration	Tracheal Aspiration C/S	Conventional	NA	NA
106	Urine	Urine For AFB	Conventional	NA	NA
107	All Fluid	Fluid C/S	Conventional	NA	NA
108	HVS	HVS C/S	Conventional	NA	NA
109	Urethral swab	Urethral Swab C/S	Conventional	NA	NA
110	CSF	Indian Ink	Conventional	NA	NA
111	Skin scrapping	Skin & Scrapping Fungal C/S	Conventional	NA	NA
112	Nail	Nail Fungal C/S	Conventional	NA	NA
113	Hair	Hair Fungal C/S	Conventional	NA	NA
114	Tissue in NS	Tissue Fungal C/S	Conventional	NA	NA
115	Urethral discharge	Urethral Smear C/S	Conventional	NA	NA
116	Semen	Semen Gram Stain	Conventional	NA	NA
117	Stool	Stool C/S	Conventional	NA	NA
118	Urine	Urine C/S	Conventional	NA	NA
119	Urine	Urine Fungal Culture	Conventional	NA	NA
120	Sputum	Sputum Fungal C/S	Conventional	NA	NA
121	CSF	CSF C/S	Conventional	NA	NA
122	Throat swab	Throat Swab C/S	Conventional	NA	NA
123	Blood	BLood C/S	Conventional/Bactec	NA	NA
124	Sputum	Sputum C/S	Conventional	NA	NA
125	Sputum	Sputum AFB Stain	Conventional	NA	NA
126	Pus	PUS C/S	Conventional	NA	NA
127	Fungal specimen	KOH Preparation	Conventional	NA	NA
128	Urethral swab	Urethral Swab Gram Stain	Conventional	NA	NA

129	Conjunctival Swab	Conjunctival Swab Gram Stain	Conventional	NA	NA
130	Wound swab	Wound Swab C/S	Conventional	NA	NA
131	BAL Fluid	BAL Fungal C/S	Conventional	NA	NA
132	Any swab	Swab C/S	Conventional	NA	NA
133	Ear swab	Ear Swab C/S	Conventional	NA	NA
134	Urine	Urine R/M/E	Conventional		NA
135	Stool	Stool R/M/E	Conventional		NA
136	Urine	Urine pregnancy test	ICT		NA
NIC					
137	Throat swab /OP/NS	Influenza PCR/ typing	RT-PCR	NA	NA
138	OP/NS	Covid -19 testing	RT-PCR	NA	NA



NEW MACHINE ABBOTT ALINITY IC SERIES					
IMMUNOASSAY					
139	Serum/Plasma	FT3	ECLIA (competitive immunoassay)	2.3-30.72 pmol/l	14.7
140	Serum/Plasma	FT4	ECLIA (competitive immunoassay)	5.41-64.35pmol/l	8.82
141	Serum/Plasma	TSH	ECLIA (sandwich immunoassay)	0.0083-100.00Miu/L	9.8
142	Serum/Plasma	C125	ECLIA (sandwich immunoassay)	1.1-1000U/ml	10.21
143	Serum/Plasma	TPSA	ECLIA (sandwich immunoassay)	0.025-100.00ng/ml	17.20
BIOCHEMISTRY					
144	Serum/Plasma	Glucose (mg/dl)	Hexokinase	5 – 800 mg/dl	5.18
145	Serum/Plasma	Urea (mg/dl)	Urease UV	5 – 267 mg/dl	5.84
146	Serum/Plasma/Urine	Creatinine (mg/dl)	Alkaline picrate	0.20 – 37 mg/dl	4.73
147	Serum/Plasma	Uric Acid (mg/dl)	Uricase colorimetric	1 – 33 mg/dl	4.39
148	Serum/Plasma	Ca (mg/dl)	Arsenazo III	2 – 24 mg/dl	7.56
149	Serum/Plasma	Phosphorus (mg/dl)	Phosphomolybdate colorimetric endpoint	0.62 -25.3 mg/dl	8.27
150	Serum/Plasma	T. Bilirubin (mg/dl)	Jendrassik	0.1 – 25 mg/dl	6.56
151	Serum/Plasma	D. Bilirubin (mg/dl)	Jendrassik	0.1 – 15 mg/dl	7.80
152	Serum/Plasma	ALP (U/L)	PNP Amp kinetic	5 – 2200 U/L	14.42
153	Serum/Plasma	GOT/AST (U/L)	UV kinetic with P5P	5.0-1985 U/L	8.83
154	Serum/Plasma	GPT/ALT (U/L)	UV kinetic with P5P	6 – 2855 U/L	8.82
155	Serum/Plasma	T. Protein (g/dl)	Biuret end point method	0.8 – 18.8 g/dl	3.31
156	Serum/Plasma	Albumin (g/dl)	BCG	0.31 – 10.5 g/dl	5.49
157	Serum/Plasma	T. Cholesterol(mg/dl)	CHOD-PAP	6.2 – 705 mg/dl	6.62
158	Serum/Plasma	HDLCholesterol (mg/dl)	Enzymatic direct	Up to 180 mg/dl	4.33

159	Serum/Plasma	LDLCholesterol (mg/dl)	Direct method	1 – 800 mg/dl	8.70
160	Serum/Plasma	Triglyceride (mg/dl)	Enzymatic endpoint	7.0 – 1420 mg/dl	7.40
161	Serum	Na ⁺	Direct ISE	100-200 mmol/l	4.23
162	Serum	K ⁺	Direct ISE	1-10.0 mmol/l	5.64

