

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-ML-20424-01-00  
according to ISO 15189:2012

Period of validity: 10.07.2019 to 30.10.2021

Date of issue: 10.07.2019

Holder of certificate:

**Medlab Ghana Limited**  
**17 Ridge Road, Roman Ridge, (+233) Accra, Ghana**

**Examinations in the field:**

Medical Laboratory Diagnosis

**Medical laboratory fields:**

Clinical Chemistry

Immunology

Microbiology

Virology

Transfusion medicine

## Medical laboratory field: Clinical chemistry

### Type of examination:

#### Ligand assays

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Luteinising Hormone (LH)	Serum	ELISA
Follicle Stimulating Hormone (FSH)	Serum	ELISA
Prolactin	Serum	ELISA
Progesteron	Serum	ELISA
Estradiol (E2)	Serum	ELISA
Beta Human Chorionic Gonadotrophin (BHCG), quantitative	Serum	ELISA
Troponin T	Serum	ELISA
CKMB-Mass	Serum	ELISA
Free Triiodothyronine (F-T4)	Serum	ELISA
Thyroid Stimulating Hormone (TSH)	Serum	ELISA
Free Thyroxine (F-T3)	Serum	ELISA
Testosterone (total)	Serum	ELISA
Ferritin	Serum	ELISA
Prostate Specific Antigen (PSA)	Serum	ELISA
CEA	Serum	ELISA
Alpha Feto Protein	Serum	ELISA
Vitamin D (25-OH)	Serum	ELISA
Vitamin B1	Serum	ELISA
Insulin	Serum	ELISA
CA125	Serum	ELISA
Cortisol	Serum	ELISA
Folate	Serum	ELISA

### Type of examination:

#### Chromatography (immune chromatography (IC))

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
D-dimer	Heparinized blood	Chromatography

### Type of Test:

#### Flow cytometry

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Full Blood Count (FBC)	Whole blood	Flow cytometry

### Type of Test:

#### Electrophoresis

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Haemoglobin Electrophoresis	Whole blood	Cellulose Acetate electrophoresis

**Type of Test:****Coagulometry**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
INR/PT	Plasma	Turbodensitometry
APTT	Plasma	Turbodensitometry

**Type of examination:****Microscopy**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
White blood cells, Red blood cells, Plts	EDTA Blood smear	Microscopy - film commenting

**Type of examination:****Qualitative tests (simple) with visual check**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
$\beta$ -HCG (Serum Pregnancy test)	Serum	Chromatography
G6PD (Reduction)	EDTA whole blood	Methemoglobin reduction

**Type of examination:****Sedimentation tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Erythrocyte Sedimentation Rate (ESR)	Whole blood	Sedimentation/ Westergreen

**Type of examination:****Spectrometry (UV- /VIS-photometry)**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Total Bilirubin	Serum	DPD - Photometric
Direct Bilirubin	Serum	DPD - Photometric
Alkaline Phosphatase (ALP)	Serum	IFCC - Photometric
Gamma Glutamyl Transferase (GGT)	Serum	IFCC - Photometric
Aspartate Aminotransferase (AST)	Serum	IFCC without Pyridoxal-5-Phos - Photometric
Alanine Aminotransferase (ALT)	Serum	ALTIF-Tris buffer with pyridoxal-5-phosphate - Photometric
Lactate Dehydrogenase (LDH)	Serum	LDIF, Lactate to Pyruvate - Photometric
Total Protein	Serum	Prep,Biuret Reagent, end point - Photometric
Albumin	Serum	Photometric - ALB1,Bromocresol Green - Photometric
Amylase	Serum	IFCC - Photometric
Urea	Serum	URUK, Urease, kinetic - Photometric
Creatinine	Serum	CRERB,Jaffe rate blanked - Photometric
Magnesium	Serum	MGXY, Xylidyl blue - Photometric
Phosphate	Serum	PHMD, Phosphomolybdate UV - Photometric

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Uric acid	Serum	Uricase/POD - Photometric
Cholesterol (Total)	Serum	CHO-POD - Photometric
Triglycerides	Serum	GPO-POD - Photometric
HDL- Cholesterol	Serum	POD - Photometric
Glucose	NAF-Plasma	Hexokinase - Photometric
Calcium	Serum	Arsenazo III - Photometric
HbA1c	Whole blood	Latex Agglutination Inhibition - Turbidimetric
C-reactive protein (CRP)	Serum	Immuno-turbidimetric Assays (IFCC)
Iron	Serum	TPTZ - Photometric
Total Iron Binding Capacity (IBCT)	Serum	Photometric
Creatine Kinase (CK)	Serum	IFCC Reference - Photometric

**Type of examination:****Electrochemical tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Sodium	Serum	ISE Indirect - Potentiometry
Potassium	Serum	ISE Indirect - Potentiometry
Chloride	Serum	ISE Indirect - Potentiometry

**Type of examination:****Spectrometry (turbidimetry/immunoturbidimetry)**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
HbA1c	Whole blood	Latex Agglutination Inhibition - Turbidimetric
C-reactive protein (CRP)	Serum	Immuno-turbidimetric Assays (IFCC)

**Test area: Immunology****Type of examination:****Agglutination tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Rheumatoid Factor (RF)	Serum	Agglutination

**Type of examination:****Ligand assays**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
IgE	Serum	ELISA

**Type of Test:****Flow cytometry**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
CD4/CD8 Count	Whole blood	Flow cytometry

**Test area: Microbiology****Type of examination:****Agglutination tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Bacteria from pure culture (Streptococci, Staphylococci)	Culture bacteria	Agglutination
Cardiolipin-AK	Serum	Agglutination/RPR
Treponema Pallidum Haemagglutination (TPHA)	Serum	Agglutination
Salmonella-AK	Serum	Agglutination/Widal

**Type of examination:****Chromatography (Immunochromatography (IC))**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Helicobacter pylori	Faeces	Immunochromatography
Faecal Occult Blood (FOB)	Faeces	Immunochromatography

**Type of examination:****Sensitivity testing of bacteria**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Aerobic bacteria	Culture	Agar diffusion test, Kirby Bauer method

**Type of examination:****Germ differentiation/identification/typing**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Anaerobic bacteria	Culture growth	Biochemical
Gardnerella vaginalis	Culture growth	Microscopy
Enterobacteriaceae	Culture growth	Biochemical
Neisseria Species	Culture growth	Culture growth behaviour
Yeast	Culture growth	Microscopy, Biochemical
Streptococci	Culture growth	Culture growth behaviour
Staphylococci	Culture growth	Culture growth behaviour
MRSA	Culture growth	Biochemical

**Type of examination:****Cultural tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Bacteria	Smears of all types, aspirates, saliva, CSF, Body fluids, blood cultures, Urine, faeces	Culture growth

**Type of examination:****Microscopy**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Mycobacterium tuberculosis (TB Micro)	Sputum	Microscopy
Parasites	Faeces	Microscopy
Sediments	Urine	Microscopy
Urogenitale bacteriae	Culture	Microscopy
Bacteria	Urine	Microscopy
Sediments	Urine	Microscopy
Plasmodium spec. (Malaria Quick test)	Whole blood	Microscopy – film commenting
Blood Parasites (Plasmodium spp.)	EDTA Blood smear	Microscopy

**Type of examination:****Qualitative tests (simple) with visual check**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Chlamydia - Ag	Serum	Chromatography

**Analytical Field: Virology****Type of Test:****Ligand assays**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Hepatitis BsAg	Serum	ELISA
Hepatitis BsAb	Serum	ELISA
Hepatitis BC IgG	Serum	ELISA
Hepatitis Bc IgM	Serum	ELISA
Hepatitis Be Ag	Serum	ELISA
Hepatitis Be Ab	Serum	ELISA
Hepatitis C Ab	Serum	ELISA
HIV	Serum	ELISA

**Type of Test:****Molecular biological tests (amplification methods)**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
Hepatitis B Viral Load	Serum	RealTime PCR

**Test area: Transfusion medicine**

**Type of examination:**

**Agglutination tests**

Analyte (measurement parameter)	Test Material (matrix)	Test Technique
ABO Rhesus factor (Blood group)	Whole blood	Agglutination
Direct coombs	Whole blood	Agglutination
Indirect coombs	Serum	Agglutination