

Deutsche Akkreditierungsstelle GmbH  
German Accreditation Body

Annex to the Accreditation Certificate D-ML-13455-01-00  
according to DIN EN ISO 15189:2007

Period of validity: 04.07.2011 to 28.09.2013

Holder of certificate:

**Freiburg Medical Laboratory, Middle East LLC**  
**P.O. Box 3068, Dubai**  
**UAE – UNITED ARAB EMIRATES**

Tests in the fields:

**Medical Laboratory Diagnosis**

**Analytical Field:**

Clinical Chemistry (including Hematology, Hemostaseology)

Immunology

Microbiology

Virology

**Type of Tests:**

Photometry\*\*

Turbidimetry\*\*

Ligand Assays\*\*

Electrophoreses

HPLC

Electrochemical Tests

Microscopy

Agglutination

Blots

IFT

PCR

Flexible scope of accreditation

Within the Type of Tests marked with\*\* examinations the laboratory may modify or introduce examination procedures without prior approval from Deutschen Akkreditierungsstelle GmbH. The listed examination procedures are examples only

**Analytical Field: Clinical Chemistry (including Hematology, Hemostaseology)**

**Type of Test: Photometry\*\***

Analyte (Parameter)	Specimen	Method
Triglycerides	Serum	Photometry
Lactate	Plasma, CSF	Photometry
Bilirubin direct	Serum	Photometry
Albumin	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
Protein, Urine + CSF	24h Urine, CSF	Photometry
Protein	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
UIBC	Serum	Photometry
Magnesium	Serum, Heparin-Plasma, 24h Urine	Photometry
Iron	Serum, Heparin-Plasma,	Photometry
Glucose	Serum, Plasma, CSF, Urine	Photometry
Creatinine	Serum, Heparin-Plasma, EDTA-Plasma, Urine	Photometry
Cholesterol	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
Calcium	Serum, Heparin-Plasma, EDTA-Plasma, Harn	Photometry
Bilirubin total	Serum, Heparin-Plasma	Photometry
BUN	Serum	Photometry
Uric acid	Serum, Heparin-Plasma, EDTA-Plasma, Urine	Photometry
HDL-Cholesterol	Serum, Heparin	Photometry
LDL-Cholesterol	Serum, Heparin	Photometry
Ammonia	EDTA-Plasma	Photometry
Phosphorus	Serum	Photometry
Alkaline Phosphatase	Serum, Heparin-Plasma	Photometry
ALT	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
Amylase	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
Pancreatic Amylase	Serum, Lithium- Heparin-Plasma	Photometry
AST	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
Cholinesterase	Serum, Heparin-Plasma, EDTA-Plasma	Photometry
CK	Serum, Heparin-Plasma	Photometry
GGT	Serum, Heparin-Plasma	Photometry
LDH	Serum, Heparin-Plasma	Photometry
Valproic Acid	Serum, Heparin-Plasma	Fluorescence polarisation
Carbamazepine	Serum, Heparin-Plasma	Fluorescence polarisation
Ethanol	Serum, EDTA-Plasma, Urine	Photometry

Analyte (Parameter)	Specimen	Method
PT	Citrated-Plasma	Optical Clot Detection
aPTT	Citrated-Plasma	Optical Clot Detection
Fibrinogen	Citrated-Plasma	Optical Clot Detection
D-Dimere	Citrated-Plasma	Latex Agglutination
Lupus Anticoagulants	Citrated-Plasma	Optical Clot Detection
CBC and Differential	EDTA-Blood	AcV

**Type of Test: Turbidimetry\*\***

Analyte (Parameter)	Specimen	Method
Rheumatoid Factor	Serum	Turbidimetry
Lipoprotein (a)	Serum	Turbidimetry
Immunoglobulin A	Serum	Turbidimetry
HBA1c	EDTA-Blood	Turbidimetry
Ferritin	Serum	Turbidimetry
CRP Latex	Serum	Turbidimetry
Albumin Urine / CSF	Urine, CSF	Turbidimetry
Antistreptolysin	Serum	Turbidimetry
Complement C3c	Serum	Turbidimetry
Complement C4	Serum	Turbidimetry
Immunoglobulin G	Serum	Turbidimetry
Immunoglobulin M	Serum	Turbidimetry
Apolipoprotein A1	Serum	Turbidimetry
Haptoglobin	Serum	Turbidimetry

**Type of Test: HPLC**

Analyte (Parameter)	Specimen	Method
Hb	EDTA-Blood	HPLC

**Type of Test: Electrochemical Tests**

Analyte (Parameter)	Specimen	Methode
Sodium	Serum	ISE
Potassium	Serum	ISE
Chloride	Serum	ISE

**Type of Test: Microscopy**

Analyte (Parameter)	Specimen	Methode
WBC count	EDTA-Blood	Microscopy
Differential manual	EDTA-Blood, Smear	Microscopy

**Type of Test: Agglutination**

Analyte (Parameter)	Specimen	Methode
ABO/Rh Blood group + reverse grouping	EDTA-Blood	Agglutination
Rh subgroups and kell	EDTA-Blood	Agglutination
Coombs test direct + indirect	EDTA-Blood, Serum	Agglutination

**Analytical Field: Immunology**

**Type of Test: Immunoblot**

Analyte (Parameter)	Specimen	Methode
RIDA Allergy Screen (respiratory/food)	Serum	Immunoblot
ANA Profile	Serum, Plasma	Western Blot

**Type of Test: IFT**

Analyte (Parameter)	Specimen	Methode
ANA IFT	Serum, Plasma	IFT
ANCA	Serum, Plasma	IFT
AMA/M2	Serum, Plasma	IFT
Endomys/Gliadin IgA	Serum, Plasma	IFT

**Type of Test: Ligand-Assays\*\***

**Electrochemiluminescenceimmunoassay**

Analyte (Parameter)	Specimen	Methode
Anti-TPO	Serum, Plasma	ECLIA
Anti-TG	Serum, Plasma	ECLIA
CA 15-3	Serum, Plasma	ECLIA
CA 19-9	Serum, Plasma	ECLIA
CA 125	Serum, Plasma	ECLIA
Prolactin	Serum, Plasma	ECLIA
PTH, intact	EDTA-Plasma, Serum	ECLIA

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Analyte (Parameter)	Specimen	Methode
Thyreogl. (TG)	Serum, Plasma	ECLIA
Vitamin B12	Serum, Plasma	ECLIA
Folate	Serum, Plasma	ECLIA
Vitamin D (25OH)	Serum, Plasma	ECLIA
Free PSA	Serum, Plasma	ECLIA
HCG+Beta	Serum, Plasma	ECLIA
Insulin	Serum, Plasma	ECLIA
SHBG	Serum, Heparin-Plasma	ECLIA
Testosterone	Serum, Plasma	ECLIA
DHEA-S	Serum, Plasma	ECLIA
Cortisol	Serum, Plasma	ECLIA
LH	Serum, Plasma	ECLIA
FSH	Serum, Plasma	ECLIA
Progesterone	Serum, Plasma	ECLIA
Estradiol	Serum, Plasma	ECLIA
CEA	Serum, Plasma	ECLIA
CK-MB STAT	Serum, Plasma	ECLIA
Total PSA	Serum, Plasma	ECLIA
Troponin T	Serum, Plasma	ECLIA
Free T3	Serum	ECLIA
Free T4	Serum	ECLIA
Total T3	Serum	ECLIA
Total T4	Serum	ECLIA
TSH	Serum	ECLIA
AFP	Serum	ECLIA
IgE, total	Serum, Heparin-Plasma	ECLIA

**Analytical Field: Microbiology**

**Type of Test: Ligand-Assays\*\***

**EIA**

Analyte (Parameter)	Specimen	Methode
Mycopl. Pneum. IgM	Serum, Plasma	EIA

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Analyte (Parameter)	Specimen	Methode
Mycopl. Pneum. IgA	Serum, Plasma	EIA
Mycopl. Pneum. IgG	Serum, Plasma	EIA
Helicobacter pylori Ag	Stool	Immunchromatography

**Electrochemiluminescenceimmunoassay**

Analyte (Parameter)	Specimen	Methode
Toxo IgG	Serum	ECLIA
Toxo IgM	Serum, EDTA-Plasma, Citrat-Plasma, Heparin-Plasma	ECLIA

**Type of Test: IFT**

Analyte (Parameter)	Specimen	Methode
Chlamydia Abs	Serum, Plasma	MIF

**Type of Test: Agglutination**

Analyte (Parameter)	Specimen	Methode
TPHA	Serum, Plasma	Agglutination

**Analytical Field: Virology**

**Type of Test: Ligand-Assays\*\***

**Electrochemiluminescenceimmunoassay**

Analyte (Parameter)	Specimen	Methode
Anti-HBs	Serum, Plasma	ECLIA
Anti-HBc	Serum, Plasma	ECLIA
Anti-HBe	Serum, Plasma	ECLIA
HbeAg	Serum, Plasma	ECLIA
HbsAg	Serum, Plasma	ECLIA
Anti-HAV	Serum, Plasma	ECLIA
Anti-HAV IgM	Serum, Plasma	ECLIA
Anti-TPO	Serum, Plasma	ECLIA
Anti-TG	Serum, Plasma	ECLIA
Rubella IgG	Serum	ECLIA
Rubella IgM	Serum	ECLIA
HCV Ab	Serum, EDTA-Plasma, Citrat-Plasma, Heparin-Plasma	ECLIA

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Analyte (Parameter)	Specimen	Methode
HIV combi	Serum, Plasma	ECLIA

**EIA**

Analyte (Parameter)	Specimen	Methode
CMV ABS IgG	Serum, Plasma	EIA
CMV ABS IgM	Serum, Plasma	EIA
HSV 1 IgM	Serum, Plasma	EIA
HSV 2 IgM	Serum, Plasma	EIA
HSV 1/2 IgM	Serum, Plasma	EIA
HSV 1 IgG	Serum, Plasma	EIA
HSV 2 IgG	Serum, Plasma	EIA
HSV 1/2 IgG	Serum, Plasma	EIA

**LIA**

Analyte (Parameter)	Specimen	Methode
HCV ABS (confirm)	Serum, Plasma	WB/LIA
HIV 1/2 ABS (confirm)	Serum, Plasma	WB/LIA

**Type of Test: IFT**

Analyte (Parameter)	Specimen	Methode
EBV-CA-IgG	Serum, Plasma	IFT
EBV-CA-IgM	Serum, Plasma	IFT
EBV-EA-IgG	Serum, Plasma	IFT
EBNA	Serum, Plasma	IFT

**Type of Test: PCR**

Analyte (Parameter)	Specimen	Method
HCV RNA	EDTA Plasma, Serum	PCR
HBV DNA	EDTA Plasma, Serum	PCR
Chlamydia	Swab, Urine	PCR

**Type of Test: Blot**

Analyte (Parameter)	Specimen	Methode
HCV Genotyping	Amplicon	Blot