

Laboratory **Madonna Diagnostic & Research Centre (Department of Laboratory Medicine)**

Certificate Number (as per ISO 15189: 2012)

Validity Last Amended on

S.No.	Product / Material of Test	Specific Test Performed	Test Method	Range of Testing / Limits of Detection	CV%
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CLINICAL BIOCHEMISTRY					
1.	Serum	Alk. Phosphatase	PNPP Buffer	10- 1000 µ/L	3.2
2.	Serum	Bilirubin Total	Modified Jendrassik & Grof	0.1 – 25.0 mg/dl	2.6
3.	Serum	Bilirubin (D)	Modified Jendrassik Grof	0.05 – 16.0 mg/dl	9.5
4.	Serum	Cholesterol	Cholesterol Esterase/ Oxidase method	50 – 600 mg/dl	1.5
5.	Serum	Creatinine	Modified Jaffe Reaction	0.05 – 20 mg/dl	1.7
6.	Plasma	Glucose	Hexokinase	1- 500 mg/dl	1.2
7.	Serum	Gamma -GT	IFCC (LY - Glutamyl 3 Carboxy 4 Nitroanilide Substrate)	7 - 800 U/L	2.8
8.	Serum	HDL - Cholesterol	Turbidimetric Immunoassay	3 -150 mg/dl	3.1
9.	Serum	Total Protein	Biuret Reaction	2.0 – 12.0 g/dl	1.1
10.	Serum	Albumin	Bromocresol purple Dye Binding Method	0.6-8.0 gm/dl	1.7
11.	Serum	SGOT (AST)	IFCC with Pyridoxal Phosphate	5-1000 U/L	2.4
12.	Serum	SGPT (ALT)	IFCC with Pyridoxal 5 Phosphate	14-1000 U/L	3.9
13.	Serum	Triglyceride	GPO – POD	15 -1000 mg/dl	2.5
14.	Serum	Urea	Urease Method	1 - 150 mg/dl	4.8
15.	Serum	Uric Acid	Modified Uricase Method	0.1 – 20 mg/dl	1.5
16.	Serum	Sodium	Ion Selective Electrode	20 – 200 mEq/L	1.0
17.	Serum	Potassium	Ion Selective Electrode	0.2 – 40 mEq/l	1.2
18.	Serum	T3	Chemiluminescent Immunoassay (CLIA)	0.1 – 8 ng/ml	2.5
19.	Serum	T4	Chemiluminescent Immunoassay (CLIA)	0.5 - 30 µg/dl	6.0
20.	Serum	TSH	Chemiluminescent Immunoassay (CLIA)	0.01 - 100 µIU/ml	2.5

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CLINICAL PATHOLOGY					
1.	URINE	Urine /RE	I) Physical (manual methods) II) Chemical 1. Strip Method	Descriptive	NA
			a) Protein (protein – error of pH principle)	0.3 - ≥ 20 g/dl (Negative – 4+)	
			b) Glucose (GOD-POD)	5.6 – 56 mmol/L (Negative – 4+)	
			c) Ph-Methyl red / Bromothymol blue Method	6 – 8 .5	
			d) Sp gravity (based on pka change)	1.005 – 1.030	
			e) Blood (3-3',5,5'-TBDD method)	10 – 200 Ery/µL (Negative – 4+)	
			f) Bilirubin (Diazotized Dichloroaniline method)	17 – 103 µmol/L (Negative – 3+)	
			g) Urobilinogen (Modified Ehrlich's reaction)	17 135 µmol/L (Negative – 4+)	
			h) Ketone (nitroprusside reaction)	0.5 – 16 mmol/L (Negative – 3+)	
			2.Manual Method	Negative – 4+	
			a) Protein - heat Method		
			b) Sugar - benedict's Method	Negative – 4+	
			c) pH - pH Paper	5 – 8	
			d) Bilirubin-Fouchet's Method	Present /Absent	
			e) Bile Salt-Sulphur Powder Method	Present /Absent	
			f) Ketone- Rotheras Test.	Negative / Positive	
			3.Microscopy	Descriptive	

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2.	Stool	Stool RE	1. Macroscopy	Descriptive Descriptive	NA
			2. Microscopy (Concentration Method) a) Parasites b) Cells c) Others		
			3. Chemical a) pH b) reducing substances	Acidic / Alkaline Present / Absent	
3.	Stool	Stool for Occult Blood	Hemospot	Positive / Negative.	NA
4.	SEMEN	Semen Analysis	1. Macroscopy (Appearance, Volume, viscosity, etc.) 2. Microscopy a) Counts b) Motility c) Morphology d) Other Cells 3. Chemical : a) pH b) fructose	Descriptive Quantitative/Descriptive	NA
5.	URINE	Pregnancy Test	RAPIDCHROMATOGRAPHIC IMMUNOASSAY	Positive / Negative.	NA

Convenor

Program Director

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HAEMATOLOGY & IMMUNOHAEMATOLOGY					
1.	EDTA Blood	Haemoglobin	Photometer, Cyanide Free	2.0 - 24.0 gm/dl	1.4
2.	EDTA Blood	Total count WBC	Electrical impedance	0.5 – 99.9 X 10 ⁹ /μL	3.8
3.	Direct Peripheral Blood Smear / EDTA Blood	Differential WBC count	Microscopy	NA	NA
4.	EDTA Blood	Platelet count	Electrical impedance	20 – 1800 X 10 ⁹ /mm ³	2.2
5.	EDTA Blood	PCV/HCT	Calculated	1.8 – 82.3 %	2.3
6.	EDTA Blood	RBC COUNT	Electrical impedance	0.30 – 7 X 10 ¹² / mm ³	1.2
7.	EDTA Blood	MCV	RBC distribution curve	Calculated	1.9
8.	EDTA Blood	MCHC	Calculated	Calculated	2.1
9.	EDTA Blood	MCH	Calculated	Calculated	1.3
10.	Citrated Blood	ESR	Westergren method	0 - 200 MM IN 1 HR.	NA
11.	EDTA Blood	MALARIA PARASITE	Microscopical (thck & thin smear)	NA	NA
12.	EDTA Blood	RETICULOCYTE COUNT	SUPRAVITAL STAINING & SMEAR STUDY	NA	NA

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13.	EDTA Blood	ABSOLUTE EOSINOPHIL COUNT	MICROSCOPY/NEUBAUER'S CHAMBER	NA	NA
14.	EDTA Blood	PERIPHERAL SMEAR	Manual staining & microscopy	NA	NA
15.	EDTA Blood	COOMBS TEST (DIRECT)	AGGLUTINATION	Positive and Negative-	NA
16.	SERUM	COOMBS TEST (INDIRECT)	AGGLUTINATION	Positive and Negative--	NA

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17.	EDTA Blood	Blood group and rh typing	Agglutination (forward & reverse)	Descriptive	NA
18.	EDTA Blood	Malaria antigen	Immunochromatographi c strip (plasmodium vivax and plasmodium falciparum)	Positive/Negative	NA

-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-

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