

Name : Mrs. KARTHIKA AJAY P  
PID No. : MED410025381  
SID No. : 712415147  
Age / Sex : 38 Year(s) / Female  
Type : OP  
Ref. Dr : MediWheel

Register On : 18/05/2024 9:19 AM  
Collection On : 18/05/2024 9:42 AM  
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Printed On : 28/05/2024 6:39 PM



Investigation

Observed  
Value

Unit

Biological  
Reference Interval

**IMMUNOHAEMATOLOGY**

BLOOD GROUPING AND Rh TYPING  
(EDTA Blood/Agglutination)

'O' 'Positive'

**Remark:** Test to be confirmed by gel method



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**HAEMATOLOGY**

**Complete Blood Count With - ESR**

Haemoglobin (EDTA Blood/Spectrophotometry)	12.2	g/dL	12.5 - 16.0
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**INTERPRETATION:** Haemoglobin values vary in Men, Women & Children. Low haemoglobin values may be due to nutritional deficiency, blood loss, renal failure etc. Higher values are often due to dehydration, smoking , high altitudes , hypoxia etc.

PCV (Packed Cell Volume) / Haematocrit (EDTA Blood/Derived)	35.9	%	37 - 47
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RBC Count (EDTA Blood/Automated Blood cell Counter)	4.69	mill/cu.mm	4.2 - 5.4
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MCV (Mean Corpuscular Volume) (EDTA Blood/Derived from Impedance)	77.0	fL	78 - 100
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MCH (Mean Corpuscular Haemoglobin) (EDTA Blood/Derived)	26.0	pg	27 - 32
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MCHC (Mean Corpuscular Haemoglobin concentration) (EDTA Blood/Derived)	33.9	g/dL	32 - 36
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RDW-CV (Derived)	13.8	%	11.5 - 16.0
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RDW-SD (Derived)	37.19	fL	39 - 46
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Total WBC Count (TC) (EDTA Blood/Derived from Impedance)	4820	cells/cu.mm	4000 - 11000
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Neutrophils (Blood/Impedance Variation & Flow Cytometry)	60	%	40 - 75
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Lymphocytes (Blood/Impedance Variation & Flow Cytometry)	31	%	20 - 45
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Eosinophils (Blood/Impedance Variation & Flow Cytometry)	03	%	01 - 06
Monocytes (Blood/Impedance Variation & Flow Cytometry)	06	%	01 - 10
Basophils (Blood/Impedance Variation & Flow Cytometry)	00	%	00 - 02
Absolute Neutrophil count (EDTA Blood/Impedance Variation & Flow Cytometry)	2.89	10 <sup>3</sup> / µl	1.5 - 6.6
Absolute Lymphocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	<b>1.49</b>	10 <sup>3</sup> / µl	1.5 - 3.5
Absolute Eosinophil Count (AEC) (EDTA Blood/Impedance Variation & Flow Cytometry)	0.14	10 <sup>3</sup> / µl	0.04 - 0.44
Absolute Monocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	0.29	10 <sup>3</sup> / µl	< 1.0
Absolute Basophil count (EDTA Blood/Impedance Variation & Flow Cytometry)	0.00	10 <sup>3</sup> / µl	< 0.2
Platelet Count (EDTA Blood/Derived from Impedance)	290	10 <sup>3</sup> / µl	150 - 450
MPV (Blood/Derived)	10.9	fL	8.0 - 13.3
PCT	<b>0.32</b>	%	0.18 - 0.28
ESR (Erythrocyte Sedimentation Rate) (Citrated Blood/Automated ESR analyser)	10	mm/hr	< 20

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**BIOCHEMISTRY**

**Liver Function Test**

Bilirubin(Total) (Serum/Diazotized Sulfanilic Acid)	0.8	mg/dL	0.1 - 1.2
Bilirubin(Direct) (Serum/Diazotized Sulfanilic Acid)	0.2	mg/dL	0.0 - 0.3
Bilirubin(Indirect) (Serum/Derived)	0.60	mg/dL	0.1 - 1.0
Total Protein (Serum/Biuret)	7.2	gm/dl	6.0 - 8.0
Albumin (Serum/Bromocresol green)	4.4	gm/dl	3.5 - 5.2
Globulin (Serum/Derived)	2.80	gm/dL	2.3 - 3.6
A : G Ratio (Serum/Derived)	1.57		1.1 - 2.2

**INTERPRETATION:** Remark : Electrophoresis is the preferred method

SGOT/AST (Aspartate Aminotransferase) (Serum/IFCC / Kinetic)	20	U/L	5 - 40
SGPT/ALT (Alanine Aminotransferase) (Serum/IFCC / Kinetic)	19	U/L	5 - 41
Alkaline Phosphatase (SAP) (Serum/PNPP / Kinetic)	50	U/L	42 - 98
GGT(Gamma Glutamyl Transpeptidase) (Serum/IFCC / Kinetic)	18	U/L	< 38



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<b><u>Lipid Profile</u></b>			
Cholesterol Total (Serum/Oxidase / Peroxidase method)	196	mg/dL	Optimal: < 200 Borderline: 200 - 239 High Risk: >= 240
Triglycerides (Serum/Glycerol phosphate oxidase / peroxidase)	107	mg/dL	Optimal: < 150 Borderline: 150 - 199 High: 200 - 499 Very High: >= 500

**INTERPRETATION:** The reference ranges are based on fasting condition. Triglyceride levels change drastically in response to food, increasing as much as 5 to 10 times the fasting levels, just a few hours after eating. Fasting triglyceride levels show considerable diurnal variation too. There is evidence recommending triglycerides estimation in non-fasting condition for evaluating the risk of heart disease and screening for metabolic syndrome, as non-fasting sample is more representative of the `usual\_ circulating level of triglycerides during most part of the day.

HDL Cholesterol (Serum/Immunoinhibition)	53	mg/dL	Optimal(Negative Risk Factor): >= 60 Borderline: 50 - 59 High Risk: < 50
LDL Cholesterol (Serum/Calculated)	121.6	mg/dL	Optimal: < 100 Above Optimal: 100 - 129 Borderline: 130 - 159 High: 160 - 189 Very High: >= 190
VLDL Cholesterol (Serum/Calculated)	21.4	mg/dL	< 30
Non HDL Cholesterol (Serum/Calculated)	143.0	mg/dL	Optimal: < 130 Above Optimal: 130 - 159 Borderline High: 160 - 189 High: 190 - 219 Very High: >= 220



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**INTERPRETATION:** 1.Non-HDL Cholesterol is now proven to be a better cardiovascular risk marker than LDL Cholesterol.  
2.It is the sum of all potentially atherogenic proteins including LDL, IDL, VLDL and chylomicrons and it is the "new bad cholesterol" and is a co-primary target for cholesterol lowering therapy.

Total Cholesterol/HDL Cholesterol Ratio (Serum/Calculated)	3.7		Optimal: < 3.3 Low Risk: 3.4 - 4.4 Average Risk: 4.5 - 7.1 Moderate Risk: 7.2 - 11.0 High Risk: > 11.0
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Triglyceride/HDL Cholesterol Ratio (TG/HDL) (Serum/Calculated)	2		Optimal: < 2.5 Mild to moderate risk: 2.5 - 5.0 High Risk: > 5.0
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LDL/HDL Cholesterol Ratio (Serum/Calculated)	2.3		Optimal: 0.5 - 3.0 Borderline: 3.1 - 6.0 High Risk: > 6.0
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<b><u>Glycosylated Haemoglobin (HbA1c)</u></b>			
HbA1C (Whole Blood/HPLC)	5.5	%	Normal: 4.5 - 5.6 Prediabetes: 5.7 - 6.4 Diabetic: >= 6.5

**INTERPRETATION:** If Diabetes - Good control : 6.1 - 7.0 % , Fair control : 7.1 - 8.0 % , Poor control >= 8.1 %

Estimated Average Glucose 111.15 mg/dl  
(Whole Blood)

**INTERPRETATION: Comments**

HbA1c provides an index of Average Blood Glucose levels over the past 8 - 12 weeks and is a much better indicator of long term glyemic control as compared to blood and urinary glucose determinations.

Conditions that prolong RBC life span like Iron deficiency anemia, Vitamin B12 & Folate deficiency, hypertriglyceridemia, hyperbilirubinemia, Drugs, Alcohol, Lead Poisoning, Asplenia can give falsely elevated HbA1C values.

Conditions that shorten RBC survival like acute or chronic blood loss, hemolytic anemia, Hemoglobinopathies, Splenomegaly, Vitamin E ingestion, Pregnancy, End stage Renal disease can cause falsely low HbA1c.



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**BIOCHEMISTRY**

BUN / Creatinine Ratio                      9.91  
  
Glucose Fasting (FBS)                      79                      mg/dL                      Normal: < 100  
(Plasma - F/GOD- POD)                      Pre Diabetic: 100 - 125  
Diabetic: >= 126

**INTERPRETATION:** Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level.

Urine sugar, Fasting                      Nil                      Nil  
(Urine - F)  
  
Glucose Postprandial (PPBS)                      84                      mg/dL                      70 - 140  
(Plasma - PP/GOD - POD)

**INTERPRETATION:** Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level. Fasting blood glucose level may be higher than Postprandial glucose, because of physiological surge in Postprandial Insulin secretion, Insulin resistance, Exercise or Stress, Dawn Phenomenon, Somogyi Phenomenon, Anti- diabetic medication during treatment for Diabetes.

Urine Sugar (PP-2 hours)                      Nil                      Negative  
(Urine - PP)  
  
Blood Urea Nitrogen (BUN)                      11.3                      mg/dL                      7.0 - 21  
(Serum/Urease UV / derived)  
  
Creatinine                      1.1                      mg/dL                      0.6 - 1.1  
(Serum/Jaffe Kinetic)

**INTERPRETATION:** Elevated Creatinine values are encountered in increased muscle mass, severe dehydration, Pre-eclampsia, increased ingestion of cooked meat, consuming Protein/ Creatine supplements, Diabetic Ketoacidosis, prolonged fasting, renal dysfunction and drugs such as cefoxitin ,cefazolin, ACE inhibitors ,angiotensin II receptor antagonists,N-acetylcysteine , chemotherapeutic agent such as flucytosine etc.

Uric Acid                      4.7                      mg/dL                      2.6 - 6.0  
(Serum/Uricase/Peroxidase)

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## IMMUNOASSAY

### THYROID PROFILE / TFT

T3 (Triiodothyronine) - Total (Serum/Chemiluminescent Immunometric Assay (CLIA))	0.96	ng/ml	0.7 - 2.04
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#### **INTERPRETATION:**

##### **Comment :**

Total T3 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T3 is recommended as it is Metabolically active.

T4 (Thyroxine) - Total (Serum/Chemiluminescent Immunometric Assay (CLIA))	10.35	Microg/dl	4.2 - 12.0
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#### **INTERPRETATION:**

##### **Comment :**

Total T4 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T4 is recommended as it is Metabolically active.

TSH (Thyroid Stimulating Hormone) (Serum/Chemiluminescent Immunometric Assay (CLIA))	4.295	µIU/mL	0.35 - 5.50
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#### **INTERPRETATION:**

Reference range for cord blood - upto 20

1 st trimester: 0.1-2.5

2 nd trimester 0.2-3.0

3 rd trimester : 0.3-3.0

(Indian Thyroid Society Guidelines)

##### **Comment :**

1.TSH reference range during pregnancy depends on Iodine intake, TPO status, Serum HCG concentration, race, Ethnicity and BMI.

2.TSH Levels are subject to circadian variation, reaching peak levels between 2-4am and at a minimum between 6-10PM.The variation can be of the order of 50%,hence time of the day has influence on the measured serum TSH concentrations.

3.Values&amplt;0.03 µIU/mL need to be clinically correlated due to presence of rare TSH variant in some individuals.



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## CLINICAL PATHOLOGY

### PHYSICAL EXAMINATION

Colour (Urine/Physical examination)	Pale Yellow		Yellow to Amber
Volume (Urine/Physical examination)	20		ml
Appearance (Urine)	Clear		

### CHEMICAL EXAMINATION

pH (Urine)	6.0		4.5 - 8.0
Specific Gravity (Urine/Dip Stick - Reagent strip method)	1.025		1.002 - 1.035
Protein (Urine/Dip Stick - Reagent strip method)	Negative		Negative
Glucose (Urine)	Nil		Nil
Ketone (Urine/Dip Stick - Reagent strip method)	Nil		Nil
Leukocytes (Urine)	Negative	leuco/uL	Negative
Nitrite (Urine/Dip Stick - Reagent strip method)	Nil		Nil
Bilirubin (Urine)	Negative	mg/dL	Negative
Blood (Urine)	Nil		Nil



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Urobilinogen (Urine/Dip Stick - Reagent strip method)	Normal		Within normal limits
<b><u>Urine Microscopy Pictures</u></b>			
RBCs (Urine/Microscopy)	Nil	/hpf	NIL
Pus Cells (Urine/Microscopy)	3-4	/hpf	< 5
Epithelial Cells (Urine/Microscopy)	4-5	/hpf	No ranges
Others (Urine)	Nil		Nil

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-- End of Report --

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Age & Gender	38/FEMALE	Visit Date	18/05/2024
Ref Doctor Name	MediWheel		

### ABDOMINO-PELVIC ULTRASONOGRAPHY

**LIVER** is normal in shape, size and has uniform echopattern.  
No evidence of focal lesion or intrahepatic biliary ductal dilatation.

Hepatic and portal vein radicals are normal.

**GALL BLADDER** show normal shape and has clear contents.

Gall bladder wall is of normal thickness. CBD is of normal calibre.

**PANCREAS** has normal shape, size and uniform echopattern.

No evidence of ductal dilatation or calcification.

**SPLEEN** show normal shape, size and echopattern.

**KIDNEYS** move well with respiration and have normal shape, size and echopattern.

Cortico- medullary differentiations are well madeout.

No evidence of calculus or hydronephrosis.

	Bipolar length (cms)	Parenchymal thickness (cms)
Right Kidney	9.6	1.6
Left Kidney	9.3	1.6

**URINARY BLADDER** show normal shape and wall thickness.

It has clear contents. No evidence of diverticula.

**UTERUS** is anteverted and has normal shape and size. It has uniform myometrial echopattern.

Endometrial echo is of normal thickness 4.3 mms.

Uterus measures as follows: LS: 6.6 cms      AP: 3.9cms      TS: 5.3cms.

**OVARIES** are normal size, shape and echotexture.

Right ovary measures: 2.8x2.3cms      Left ovary measures: 2.4x1.8cms

POD & adnexa are free.

No evidence of ascites.

### IMPRESSION:

➤ **NO SIGNIFICANT ABNORMALITY DETECTED.**

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2.The results reported here in are subject to interpretation by qualified medical professionals only.

3.Customer identities are accepted provided by the customer or their representative.

4.information about the customer's condition at the time of sample collection such as fasting, food consumption, medication, etc are accepted as provided by the customer or representative and shall not be investigated for its truthfulness.

5.If any specimen/sample is received from any others laboratory/hospital,its is presumed that the sample belongs to the patient identified or named.

6.Test results should be interpreted in context of clinical and other findings if any.In case of any clarification /doubt , the referring doctor/patient can contact the respective section head of the laboratory.

7.Results of the test are influenced by the various factors such as sensitivity, specificity of the procedures of the tests, quality of the samples and drug interactions etc.,

8.If the test results are found not to be correlating clinically can contact the lab in charge for clarification or retesting where practicable within 24 hours from the time of issue of results.

9.Liability is limited to the extend of amount billed.

10.Reports are subject to interpretation in their entirety.partial or selective interpretation may lead to false opinion.

11.Disputes,if any , with regard to the report findings are subject to the exclusive jurisdiction of the competent courts chennai only.

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## CONSULTANT RADIOLOGISTS

**DR. ANITHA ADARSH**  
MB/mm

**DR. MOHAN B**

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**X - RAY CHEST PA VIEW**

Bilateral lung fields appear normal.

Cardiac size is within normal limits.

Bilateral hilar regions appear normal.

Bilateral domes of diaphragm and costophrenic angles are normal.

Visualised bones and soft tissues appear normal.

***Impression: No significant abnormality detected.***



**DR. MOHAN. B**  
**(DMRD, DNB, EDIR, FELLOW IN CARDIAC**  
**MRI)**  
**CONSULTANT RADIOLOGIST**