

Name : Mr. N KUMARA  
PID No. : MED111426485  
SID No. : 712401467  
Age / Sex : 54 Year(s) / Male  
Type : OP  
Ref. Dr : MediWheel

Register On : 13/01/2024 8:04 AM  
Collection On : 13/01/2024 11:07 AM  
Report On : 13/01/2024 6:35 PM  
Printed On : 30/01/2024 2:03 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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Eosinophils (Blood/Impedance Variation & Flow Cytometry)	01	%	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)	4.97	10 <sup>3</sup> / µl	1.5 - 6.6
Absolute Lymphocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	3.43	10 <sup>3</sup> / µl	1.5 - 3.5
Absolute Eosinophil Count (AEC) (EDTA Blood/Impedance Variation & Flow Cytometry)	0.09	10 <sup>3</sup> / µl	0.04 - 0.44
Absolute Monocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	0.54	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)	311	10 <sup>3</sup> / µl	150 - 450
MPV (Blood/Derived)	11.1	fL	7.9 - 13.7
PCT	<b>0.35</b>	%	0.18 - 0.28
ESR (Erythrocyte Sedimentation Rate) (Citratd Blood/Automated ESR analyser)	05	mm/hr	< 20

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<b><u>Lipid Profile</u></b>			
Cholesterol Total (Serum/Oxidase / Peroxidase method)	224	mg/dL	Optimal: < 200 Borderline: 200 - 239 High Risk: >= 240
Triglycerides (Serum/Glycerol phosphate oxidase / peroxidase)	300	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.

**Remark:** Kindly correlate clinically.

HDL Cholesterol (Serum/Immunoinhibition)	25	mg/dL	Optimal(Negative Risk Factor): >= 60 Borderline: 40 - 59 High Risk: < 40
LDL Cholesterol (Serum/Calculated)	139	mg/dL	Optimal: < 100 Above Optimal: 100 - 129 Borderline: 130 - 159 High: 160 - 189 Very High: >= 190
VLDL Cholesterol (Serum/Calculated)	60	mg/dL	< 30
Non HDL Cholesterol (Serum/Calculated)	199.0	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)	9		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)	12		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)	5.6		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)	06.8	%	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 148.46 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 glyceemic 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

7.9

Glucose Fasting (FBS)  
(Plasma - F/GOD- POD)

100

mg/dL

Normal: < 100  
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.

Glucose Postprandial (PPBS)  
(Plasma - PP/GOD - POD)

239

mg/dL

70 - 140

### **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.

Blood Urea Nitrogen (BUN)  
(Serum/Urease UV / derived)

11.9

mg/dL

7.0 - 21

Creatinine  
(Serum/Jaffe Kinetic)

1.6

mg/dL

0.9 - 1.3

**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.

**Remark:** Kindly correlate clinically.

Uric Acid  
(Serum/Uricase/Peroxidase)

5.8

mg/dL

3.5 - 7.2



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## IMMUNOASSAY

### THYROID PROFILE / TFT

T3 (Triiodothyronine) - Total (Serum/Chemiluminescent Immunometric Assay (CLIA))	1.04	ng/ml	0.4 - 1.81
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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))	<b>13.46</b>	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))	2.045	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)	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 ó'Reagent strip method)	1.010		1.002 - 1.035
Protein (Urine/Dip Stick ó'Reagent strip method)	Negative		Negative
Glucose (Urine)	Negative		Nil
Ketone (Urine/Dip Stick ó'Reagent strip method)	Nil		Nil
Leukocytes (Urine)	Negative	leuco/uL	Negative
Nitrite (Urine/Dip Stick ó'Reagent strip method)	Nil		Nil
Bilirubin (Urine)	Negative	mg/dL	Negative
Blood (Urine)	Nil		Nil



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Urobilinogen (Urine/Dip Stick ó'Reagent strip method)	Within normal limits		Within normal limits
<b><u>Urine Microscopy Pictures</u></b>			
RBCs (Urine/Microscopy)	NIL	/hpf	NIL
Pus Cells (Urine/Microscopy)	2-4	/hpf	< 5
Epithelial Cells (Urine/Microscopy)	1-2	/hpf	No ranges
Others (Urine)	NIL		Nil

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-- End of Report --

Name	Mr. N KUMARA	ID	MED111426485
Age & Gender	54Y/M	Visit Date	Jan 13 2024 8:03AM
Ref Doctor	MediWheel		

**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**