

CID : 2431420838

Name : MR.BHUPENDER SINGH

Age / Gender : 36 Years / Male

Consulting Dr. : -

**Reg. Location**: G B Road, Thane West (Main Centre)

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: 09-Nov-2024 / 09:57 : 09-Nov-2024 / 14:00

# AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE

## CBC (Complete Blood Count), Blood

<u>PARAMETER</u>	<u>RESULTS</u>	<b>BIOLOGICAL REF RANGE</b>	<u>METHOD</u>	
RBC PARAMETERS				
Haemoglobin	12.3	13.0-17.0 g/dL	Spectrophotometric	
RBC	4.52	4.5-5.5 mil/cmm	Elect. Impedance	
PCV	38.3	40-50 %	Measured	
MCV	84.8	80-100 fl	Calculated	
MCH	27.3	27-32 pg	Calculated	
MCHC	32.2	31.5-34.5 g/dL	Calculated	
RDW	14.8	11.6-14.0 %	Calculated	
WBC PARAMETERS				
WBC Total Count	4810	4000-10000 /cmm	Elect. Impedance	
WBC DIFFERENTIAL AND A	BSOLUTE COUNTS			
Lymphocytes	36.6	20-40 %		
Absolute Lymphocytes	1760.5	1000-3000 /cmm	Calculated	
Monocytes	5.7	2-10 %		
Absolute Monocytes	274.2	200-1000 /cmm	Calculated	
Neutrophils	55.1	40-80 %		
Absolute Neutrophils	2650.3	2000-7000 /cmm	Calculated	
Eosinophils	2.6	1-6 %		
Absolute Eosinophils	125.1	20-500 /cmm	Calculated	
Basophils	0.0	0.1-2 %		
Absolute Basophils	0.0	20-100 /cmm	Calculated	
Immature Leukocytes	-			

WBC Differential Count by Absorbance & Impedance method/Microscopy.

## **PLATELET PARAMETERS**

Platelet Count	167000	150000-400000 /cmm	Elect. Impedance
MPV	10.1	6-11 fl	Calculated
PDW	16.7	11-18 %	Calculated

## **RBC MORPHOLOGY**

Hypochromia -Microcytosis - CID : 2431420838

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Macrocytosis

Anisocytosis

Poikilocytosis

Polychromasia

**Target Cells** 

Basophilic Stippling

Normoblasts

Others Normocytic, Normochromic

WBC MORPHOLOGY

PLATELET MORPHOLOGY

COMMENT

Specimen: EDTA Whole Blood

ESR, EDTA WB-ESR 13 2-15 mm at 1 hr. Sedimentation

Clinical Significance: The erythrocyte sedimentation rate (ESR), also called a sedimentation rate is the rate red blood cells sediment in a period of time.

#### Interpretation:

Factors that increase ESR: Old age, Pregnancy, Anemia

Factors that decrease ESR: Extreme leukocytosis, Polycythemia, Red cell abnormalities- Sickle cell disease

## Limitations:

- It is a non-specific measure of inflammation.
- The use of the ESR as a screening test in asymptomatic persons is limited by its low sensitivity and specificity.

Reflex Test: C-Reactive Protein (CRP) is the recommended test in acute inflammatory conditions.

#### Reference:

- Brigden ML. Clinical utility of the erythrocyte sedimentation rate. American family physician. 1999 Oct 1;60(5):1443-50.

\*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD G B Road Lab, Thane West \*\*\* End Of Report \*\*\*

> Dr.IMRAN MUJAWAR M.D (Path)

**Pathologist** 



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## **AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE**

<u>PARAMETER</u>	<u>RESULTS</u>	<b>BIOLOGICAL REF RANGE</b>	<u>METHOD</u>
GLUCOSE (SUGAR) FASTING, Fluoride Plasma Fasting	95.7	Non-Diabetic: < 100 mg/dl Impaired Fasting Glucose: 100-125 mg/dl Diabetic: >/= 126 mg/dl	Hexokinase
BILIRUBIN (TOTAL), Serum	0.46	0.3-1.2 mg/dl	Vanadate oxidation
BILIRUBIN (DIRECT), Serum	0.18	0-0.3 mg/dl	Vanadate oxidation
BILIRUBIN (INDIRECT), Serum	0.28	<1.2 mg/dl	Calculated
TOTAL PROTEINS, Serum	7.2	5.7-8.2 g/dL	Biuret
ALBUMIN, Serum	4.5	3.2-4.8 g/dL	BCG
GLOBULIN, Serum	2.7	2.3-3.5 g/dL	Calculated
A/G RATIO, Serum	1.7	1 - 2	Calculated
SGOT (AST), Serum	26.9	<34 U/L	Modified IFCC
SGPT (ALT), Serum	41.1	10-49 U/L	Modified IFCC
GAMMA GT, Serum	24.3	<73 U/L	Modified IFCC
ALKALINE PHOSPHATASE, Serum	104.7	46-116 U/L	Modified IFCC
BLOOD UREA, Serum	22.3	19.29-49.28 mg/dl	Calculated
BUN, Serum	10.4	9.0-23.0 mg/dl	Urease with GLDH
CREATININE, Serum eGFR, Serum	0.91 112	0.73-1.18 mg/dl (ml/min/1.73sqm) Normal or High: Above 90 Mild decrease: 60-89 Mild to moderate decrease: 45- 59 Moderate to severe decrease: 30- -44 Severe decrease: 15-29 Kidney failure: < 15	

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Note: eGFR estimation is calculated using 2021 CKD-EPI GFR equation

URIC ACID, Serum

6.6

3.7-9.2 mg/dl

Collected

Reported

Uricase/ Peroxidase

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Dr.IMRAN MUJAWAR M.D ( Path ) Pathologist



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## AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE **GLYCOSYLATED HEMOGLOBIN (HbA1c)**

**BIOLOGICAL REF RANGE PARAMETER RESULTS METHOD** 

Glycosylated Hemoglobin (HbA1c), EDTA WB - CC

5.1 Non-Diabetic Level: < 5.7 %

Prediabetic Level: 5.7-6.4 % Diabetic Level: >/= 6.5 %

Collected

Reported

mg/dl

Calculated

**HPLC** 

Estimated Average Glucose (eAG), EDTA WB - CC

99.7

#### Intended use:

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- In patients who are meeting treatment goals, HbA1c test should be performed at least 2 times a year
- In patients whose therapy has changed or who are not meeting glycemic goals, it should be performed quarterly
- For microvascular disease prevention, the HbA1C goal for non pregnant adults in general is Less than 7%.

#### Clinical Significance:

- HbA1c. Glycosylated hemoglobin or glycated hemoglobin, is hemoglobin with glucose molecule attached to it.
- The HbA1c test evaluates the average amount of glucose in the blood over the last 2 to 3 months by measuring the percentage of glycosylated hemoglobin in the blood.

## Test Interpretation:

- The HbA1c test evaluates the average amount of glucose in the blood over the last 2 to 3 months by measuring the percentage of Glycosylated hemoglobin in the blood.
- HbA1c test may be used to screen for and diagnose diabetes or risk of developing diabetes.
- To monitor compliance and long term blood glucose level control in patients with diabetes.
- Index of diabetic control, predicting development and progression of diabetic micro vascular complications.

## Factors affecting HbA1c results:

Increased in: High fetal hemoglobin, Chronic renal failure, Iron deficiency anemia, Splenectomy, Increased serum triglycerides, Alcohol ingestion, Lead/opiate poisoning and Salicylate treatment.

Decreased in: Shortened RBC lifespan (Hemolytic anemia, blood loss), following transfusions, pregnancy, ingestion of large amount of Vitamin E or Vitamin C and Hemoglobinopathies

Reflex tests: Blood glucose levels, CGM (Continuous Glucose monitoring)

References: ADA recommendations, AACC, Wallach's interpretation of diagnostic tests 10th edition.

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> Dr.IMRAN MUJAWAR M.D (Path)

**Pathologist** 



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# AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE **URINE EXAMINATION REPORT**

<u>PARAMETER</u>	RESULTS	BIOLOGICAL REF RANGE	<u>METHOD</u>
PHYSICAL EXAMINATION			
Color	Pale yellow	Pale Yellow	-
Transparency	Clear	Clear	-
<b>CHEMICAL EXAMINATION</b>			
Specific Gravity	1.015	1.010-1.030	Chemical Indicator
Reaction (pH)	Acidic (5.0)	4.5 - 8.0	Chemical Indicator
Proteins	Absent	Absent	pH Indicator
Glucose	Absent	Absent	GOD-POD
Ketones	Absent	Absent	Legals Test
Blood	Absent	Absent	Peroxidase
Bilirubin	Absent	Absent	Diazonium Salt
Urobilinogen	Normal	Normal	Diazonium Salt
Nitrite	Absent	Absent	Griess Test
MICROSCOPIC EXAMINATION			
(WBC)Pus cells / hpf	1-2	0-5/hpf	
Red Blood Cells / hpf	Absent	0-2/hpf	
Epithelial Cells / hpf	1-2	0-5/hpf	
Hyaline Casts	Absent	Absent	
Pathological cast	Absent	Absent	
Calcium oxalate monohydrate crystals	Absent	Absent	
Calcium oxalate dihydrate crystals	Absent	Absent	
Triple phosphate crystals	Absent	Absent	
Uric acid crystals	Absent	Absent	
Amorphous debris	Absent	Absent	
Bacteria / hpf	1-2	0-20/hpf	
Yeast	Absent	Absent	
Others	-		

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## AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE **BLOOD GROUPING & Rh TYPING**

**PARAMETER RESULTS** 

**ABO GROUP** В

Rh TYPING Positive

NOTE: Test performed by Semi- automated column agglutination technology (CAT)

Specimen: EDTA Whole Blood and/or serum

#### Clinical significance:

ABO system is most important of all blood group in transfusion medicine

#### Limitations:

- ABO blood group of new born is performed only by cell (forward) grouping because allo antibodies in cord blood are of maternal origin.
- Since A & B antigens are not fully developed at birth, both Anti-A & Anti-B antibodies appear after the first 4 to 6 months of life. As a result, weaker reactions may occur with red cells of newborns than of adults.
- Confirmation of newborn's blood group is indicated when A & B antigen expression and the isoagglutinins are fully developed at 2 to 4 years of age & remains constant throughout life.
- Cord blood is contaminated with Wharton's jelly that causes red cell aggregation leading to false positive result
- The Hh blood group also known as Oh or Bombay blood group is rare blood group type. The term Bombay is used to refer the phenotype that lacks normal expression of ABH antigens because of inheritance of hh genotype.

## Refernces:

- Denise M Harmening, Modern Blood Banking and Transfusion Practices- 6th Edition 2012. F.A. Davis company. Philadelphia
- 2. AABB technical manual

\*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD G B Road Lab, Thane West \*\*\* End Of Report \*\*

> Dr.IMRAN MUJAWAR M.D (Path) **Pathologist**



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# AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE LIPID PROFILE

<u>PARAMETER</u>	<u>RESULTS</u>	<b>BIOLOGICAL REF RANGE</b>	<u>METHOD</u>
CHOLESTEROL, Serum	157.7	Desirable: <200 mg/dl Borderline High: 200-239mg/dl High: >/=240 mg/dl	CHOD-POD
TRIGLYCERIDES, Serum	93	Normal: <150 mg/dl Borderline-high: 150 - 199 mg/dl High: 200 - 499 mg/dl Very high:>/=500 mg/dl	Enzymatic colorimetric
HDL CHOLESTEROL, Serum	39.5	Desirable: >60 mg/dl Borderline: 40 - 60 mg/dl Low (High risk): <40 mg/dl	Elimination/ Catalase
NON HDL CHOLESTEROL, Serum	118.2	Desirable: <130 mg/dl Borderline-high:130 - 159 mg/dl High:160 - 189 mg/dl Very high: >/=190 mg/dl	Calculated
LDL CHOLESTEROL, Serum	99.6	Optimal: <100 mg/dl Near Optimal: 100 - 129 mg/dl Borderline High: 130 - 159 mg/dl High: 160 - 189 mg/dl Very High: >/= 190 mg/dl	Calculated
VLDL CHOLESTEROL, Serum	18.6	< /= 30 mg/dl	Calculated
CHOL / HDL CHOL RATIO, Serum	4.0	0-4.5 Ratio	Calculated
LDL CHOL / HDL CHOL RATIO, Serum	2.5	0-3.5 Ratio	Calculated

<sup>\*</sup>Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD SDRL, Vidyavihar Lab  $^{***}$  End Of Report  $^{***}$ 



Dr.ANUPA DIXIT M.D.(PATH) Consultant - Pathologist



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## AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE **THYROID FUNCTION TESTS**

PARAMETER	<u>RESULTS</u>	BIOLOGICAL REF RANGE	WETHOD
Free T3, Serum	5.2	3.5-6.5 pmol/L	CLIA
Free T4, Serum	17.2	11.5-22.7 pmol/L	CLIA
sensitiveTSH, Serum	2.774	0.55-4.78 microU/ml	CLIA



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## Interpretation:

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A thyroid panel is used to evaluate thyroid function and/or help diagnose various thyroid disorders.

#### Clinical Significance:

- 1)TSH Values between high abnormal upto15 microIU/ml should be correlated clinically or repeat the test with new sample as physiological
- can give falsely high TSH.
- 2)TSH values may be trasiently altered becuase of non thyroidal illness like severe infections liver disease, renal and heart severe burns, trauma and surgery etc.

TSH	FT4 / T4	FT3 / T3	Interpretation
High	Normal	Normal	Subclinical hypothyroidism, poor compliance with thyroxine, drugs like amiodarone, Recovery phase of non-thyroidal illness, TSH Resistance.
High	Low	Low	Hypothyroidism, Autoimmune thyroiditis, post radio iodine Rx, post thyroidectomy, Anti thyroid drugs, tyrosine kinase inhibitors & amiodarone, amyloid deposits in thyroid, thyroid tumors & congenital hypothyroidism.
Low	High	High	Hyperthyroidism, Graves disease, toxic multinodular goiter, toxic adenoma, excess iodine or thyroxine intake, pregnancy related (hyperemesis gravidarum, hydatiform mole)
Low	Normal	Normal	Subclinical Hyperthyroidism, recent Rx for Hyperthyroidism, drugs like steroids & dopamine), Non thyroidal illness.
Low	Low	Low	Central Hypothyroidism, Non Thyroidal Illness, Recent Rx for Hyperthyroidism.
High	High	High	Interfering anti TPO antibodies, Drug interference: Amiodarone, Heparin, Beta Blockers, steroids & anti epileptics.

Diurnal Variation: TSH follows a diurnal rhythm and is at maximum between 2 am and 4 am, and is at a minimum between 6 pm and 10 pm. The variation is on the order of 50 to 206%. Biological variation: 19.7% (with in subject variation)

Reflex Tests:Anti thyroid Antibodies, USG Thyroid ,TSH receptor Antibody. Thyroglobulin, Calcitonin

### Limitations:

- 1. Samples should not be taken from patients receiving therapy with high biotin doses (i.e. >5 mg/day) until atleast 8 hours following the last biotin administration.
- 2. Patient samples may contain heterophilic antibodies that could react in immunoassays to give falsely elevated or depressed results. this assay is designed to minimize interference from heterophilic antibodies.

## Reference:

- 1.O.koulouri et al. / Best Practice and Research clinical Endocrinology and Metabolism 27(2013)
- 2.Interpretation of the thyroid function tests, Dayan et al. THE LANCET . Vol 357
- 3. Tietz , Text Book of Clinical Chemistry and Molecular Biology -5th Edition
- 4. Biological Variation: From principles to Practice-Callum G Fraser (AACC Press)

\*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD SDRL, Vidyavihar Lab \*\*\* End Of Report \*\*\*





Dr.ANUPA DIXIT M.D.(PATH) **Consultant - Pathologist** 

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# AERFOCAMI HEALTHCARE BELOW 40 MALE/FEMALE FUS and KETONES

PARAMETER RESULTS BIOLOGICAL REF RANGE METHOD

Urine Sugar (Fasting) Absent Absent Urine Ketones (Fasting) Absent Absent

\*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD G B Road Lab, Thane West  $^{***}$  End Of Report  $^{***}$ 

Dr.IMRAN MUJAWAR M.D ( Path ) Pathologist