



Name : Mrs. MADHURI NAUTIYAL  
Lab No. : 182387104  
Ref By : SELF  
Collected : 27/7/2024 8:57:00AM  
A/c Status : P  
Collected at : FPSC KARGI CHOWK  
J.P. PLAZA, NEAR KARGI CHOWK, DEHRADUN  
248001  
Age : 48 Years  
Gender : Female  
Reported : 27/7/2024 1:54:20PM  
Report Status : Final  
Processed at : Dr. Lal PathLabs Ltd  
Cubic Tower,2nd Floor, 65 Ballupur  
II,Chakrata Road Dehradun-248001

## Test Report

Test Name	Results	Units	Bio. Ref. Interval
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### SwasthFit Super 4

#### LIVER & KIDNEY PANEL, SERUM

Creatinine (Modified Jaffe)	0.56	mg/dL	0.51 - 0.95
GFR Estimated	112	mL/min/1.73m2	>59
GFR Category	G1		
Urea (Urease UV)	17.30	mg/dL	17.00 - 43.00
Urea Nitrogen Blood	8.08	mg/dL	6.00 - 20.00
BUN/Creatinine Ratio	14		
Uric Acid (Uricase)	5.74	mg/dL	2.60 - 6.00
AST (SGOT) (IFCC without P5P)	21.2	U/L	<35
ALT (SGPT) (IFCC without P5P)	16.6	U/L	<35
GGTP (GCNA)	12.6	U/L	<38
Alkaline Phosphatase (ALP) (PNPP)	101.79	U/L	30 - 120
Bilirubin Total (DPD)	0.41	mg/dL	0.30 - 1.20
Bilirubin Direct (DPD)	0.06	mg/dL	<0.20
Bilirubin Indirect (Calculated)	0.35	mg/dL	<1.10
Total Protein (Biuret)	7.64	g/dL	6.40 - 8.30
Albumin (BCG)	4.61	g/dL	3.50 - 5.20
A : G Ratio (Calculated)	1.52		0.90 - 2.00
Globulin(Calculated)	3.03	gm/dL	2.0 - 3.5
Calcium, Total (Arsenazo III)	9.60	mg/dL	8.80 - 10.60



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Test Name	Results	Units	Bio. Ref. Interval
Phosphorus (Molybdate UV)	3.61	mg/dL	2.40 - 4.40
Sodium (Indirect ISE)	138.00	mEq/L	136.00 - 146.00
Potassium (Indirect ISE)	4.20	mEq/L	3.50 - 5.10
Chloride (Indirect ISE)	105.90	mEq/L	101.00 - 109.00





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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
<b>LIPID SCREEN, SERUM</b>			
Cholesterol, Total (CHO-POD)	224.80	mg/dL	<200.00
Triglycerides (GPO-POD)	117.80	mg/dL	<150.00
HDL Cholesterol (Direct Enzymatic)	69.82	mg/dL	>50.00
LDL Cholesterol, Calculated (Calculated)	131.42	mg/dL	<100.00
VLDL Cholesterol, Calculated (Calculated)	23.56	mg/dL	<30.00
Non-HDL Cholesterol (Calculated)	155	mg/dL	<130

#### Note

- Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL& LDL Cholesterol.
- Additional testing for Apolipoprotein B, hsCRP, Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement.

#### Treatment Goals as per Lipid Association of India 2020

RISK CATEGORY	TREATMENT GOAL		CONSIDER THERAPY	
	LDL CHOLESTEROL (LDL-C) (mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)	LDL CHOLESTEROL (LDL-C) (mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)
Extreme Risk Group Category A	<50 (Optional goal ≤30)	<80 (Optional goal ≤60)	≥50	≥80
Extreme Risk Group Category B	≤30	≤60	>30	>60
Very High	<50	<80	≥50	≥80
High	<70	<100	≥70	≥100
Moderate	<100	<130	≥100	≥130
Low	<100	<130	≥130*	≥160*

\*In low risk patient, consider therapy after an initial non-pharmacological intervention for at least 3 months





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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
<b>GLUCOSE, FASTING (F)</b> (Hexokinase)			
Glucose Fasting	107.30	mg/dL	70.00 - 100.00
<b>VITAMIN B12; CYANOCOBALAMIN</b> (ECLIA)			
Vitamin B12; Cyanocobalamin	596.00	pg/mL	211.00 - 946.00

### Notes

1. Interpretation of the result should be considered in relation to clinical circumstances.
2. It is recommended to consider supplementary testing with plasma Methylmalonic acid (MMA) or plasma homocysteine levels to determine biochemical cobalamin deficiency in presence of clinical suspicion of deficiency but indeterminate levels. Homocysteine levels are more sensitive but MMA is more specific
3. False increase in Vitamin B12 levels may be observed in patients with intrinsic factor blocking antibodies, MMA measurement should be considered in such patients
4. The concentration of Vitamin B12 obtained with different assay methods cannot be used interchangeably due to differences in assay methods and reagent specificity

<b>VITAMIN D, 25 - HYDROXY, SERUM</b> (ECLIA)			
Vitamin D, 25 Hydroxy	79.43	nmol/L	75.00 - 250.00

### Interpretation

LEVEL	REFERENCE RANGE IN nmol/L	COMMENTS
Deficient	< 50	High risk for developing bone disease
Insufficient	50-74	Vitamin D concentration which normalizes Parathyroid hormone concentration
Sufficient	75-250	Optimal concentration for maximal health benefit
Potential intoxication	>250	High risk for toxic effects







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### Test Report

Test Name Note	Results	Units	Bio. Ref. Interval
<ul style="list-style-type: none"> <li>The assay measures both D2 (Ergocalciferol) and D3 (Cholecalciferol) metabolites of vitamin D.</li> <li>25 (OH)D is influenced by sunlight, latitude, skin pigmentation, sunscreen use and hepatic function.</li> <li>Optimal calcium absorption requires vitamin D 25 (OH) levels exceeding 75 nmol/L.</li> <li>It shows seasonal variation, with values being 40-50% lower in winter than in summer.</li> <li>Levels vary with age and are increased in pregnancy.</li> <li>A new test Vitamin D, Ultrasensitive by LC-MS/MS is also available</li> </ul>			

### THYROID PROFILE,TOTAL, SERUM (ECLIA)

T3, Total	1.02	ng/mL	0.80 - 2.00
T4, Total	9.07	µg/dL	5.10 - 14.10
TSH	1.91	µIU/mL	0.27 - 4.20

### Note

1. TSH levels are subject to circadian variation, reaching peak levels between 2 - 4.a.m. and at a minimum between 6-10 pm . The variation is of the order of 50% . hence time of the day has influence on the measured serum TSH concentrations.
2. Alteration in concentration of Thyroid hormone binding protein can profoundly affect Total T3 and/or Total T4 levels especially in pregnancy and in patients on steroid therapy.
3. Unbound fraction ( Free,T4 /Free,T3) of thyroid hormone is biologically active form and correlate more closely with clinical status of the patient than total T4/T3 concentration
4. Values <0.03 uIU/mL need to be clinically correlated due to presence of a rare TSH variant in some individuals



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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
<b>HbA1c (GLYCOSYLATED HEMOGLOBIN), BLOOD</b> (HPLC, NGSP Certified)			
HbA1c	6.4	%	4.00 - 5.60
Estimated average glucose (eAG)	137	mg/dL	

### Interpretation

HbA1c result is suggestive of at risk for Diabetes (Prediabetes)/ well controlled Diabetes in a known Diabetic

### Interpretation as per American Diabetes Association (ADA) Guidelines

Reference Group	Non diabetic adults >=18 years	At risk (Prediabetes)	Diagnosing Diabetes	Therapeutic goals for glycemic control
HbA1c in %	4.0-5.6	5.7-6.4	>= 6.5	<7.0

**Note:** Presence of Hemoglobin variants and/or conditions that affect red cell turnover must be considered, particularly when the HbA1C result does not correlate with the patient's blood glucose levels.

FACTORS THAT INTERFERE WITH HbA1C MEASUREMENT	FACTORS THAT AFFECT INTERPRETATION OF HbA1C RESULTS
Hemoglobin variants,elevated fetal hemoglobin (HbF) and chemically modified derivatives of hemoglobin (e.g. carbamylated Hb in patients with renal failure) can affect the accuracy of HbA1c measurements	Any condition that shortens erythrocyte survival or decreases mean erythrocyte age (e.g.,recovery from acute blood loss, hemolytic anemia, HbSS, HbCC, and HbSC) will falsely lower HbA1c test results regardless of the assay method used.Iron deficiency anemia is associated with higher HbA1c



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Test Report

Test Name	Results	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT; CBC			
Hemoglobin (SLS method)	12.50	g/dL	12.00 - 15.00
Packed Cell Volume (PCV) (Sheath Flow DC detection method)	40.20	%	36.00 - 46.00
RBC Count (Sheath Flow DC detection method)	4.32	mill/mm3	3.80 - 4.80
MCV (Calculated)	93.10	fL	83.00 - 101.00
Mentzer Index (Calculated)	21.6		
MCH (Calculated)	28.90	pg	27.00 - 32.00
MCHC (Calculated)	31.10	g/dL	31.50 - 34.50
Red Cell Distribution Width (RDW) (Calculated)	13.10	%	11.60 - 14.00
Total Leukocyte Count (TLC) (Fluorescent Flowcytometry)	7.28	thou/mm3	4.00 - 10.00
Differential Leucocyte Count (DLC)			
Segmented Neutrophils (Fluorescent Flowcytometry)	57.90	%	40.00 - 80.00
Lymphocytes (Fluorescent Flowcytometry)	35.00	%	20.00 - 40.00
Monocytes (Fluorescent Flowcytometry)	4.70	%	2.00 - 10.00
Eosinophils (Fluorescent Flowcytometry)	1.60	%	1.00 - 6.00
Basophils (Fluorescent Flowcytometry)	0.80	%	<2.00
Absolute Leucocyte Count			
Neutrophils (Calculated)	4.22	thou/mm3	2.00 - 7.00
Lymphocytes (Calculated)	2.55	thou/mm3	1.00 - 3.00
Monocytes (Calculated)	0.34	thou/mm3	0.20 - 1.00
Eosinophils (Calculated)	0.12	thou/mm3	0.02 - 0.50



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Basophils (Calculated)	0.06	thou/mm3	0.02 - 0.10
Platelet Count (Sheath Flow DC detection method)	151	thou/mm3	150.00 - 410.00
Mean Platelet Volume (Calculated)	13.9	fL	6.5 - 12.0

### Comment

In anaemic conditions Mentzer index is used to differentiate Iron Deficiency Anaemia from Beta- Thalassemia trait. If Mentzer Index value is >13, there is probability of Iron Deficiency Anaemia. A value <13 indicates likelihood of Beta- Thalassemia trait and Hb HPLC is advised to rule out the Thalassemia trait.

### Note

- As per the recommendation of International council for Standardization in Hematology, the differential leucocyte counts are additionally being reported as absolute numbers of each cell in per unit volume of blood
- Test conducted on EDTA whole blood



Dr Pritika Uniyal  
MD, Pathology  
Chief of Lab

-----End of report-----





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Test Report

Test Name	Results	Units	Bio. Ref. Interval
IMPORTANT INSTRUCTIONS			
•Test results released pertain to the specimen submitted. •All test results are dependent on the quality of the sample received by the Laboratory. •Laboratory investigations are only a tool to facilitate in arriving at a diagnosis and should be clinically correlated by the Referring Physician. •Report delivery may be delayed due to unforeseen circumstances. Inconvenience is regretted. •Certain tests may require further testing at additional cost for derivation of exact value. Kindly submit request within 72 hours post reporting. •Test results may show interlaboratory variations. •The Courts/Forum at Delhi shall have exclusive jurisdiction in all disputes/claims concerning the test(s) & or results of test(s). •Test results are not valid for medico legal purposes. •This is computer generated medical diagnostic report that has been validated by Authorized Medical Practitioner/Doctor. •The report does not need physical signature.			
(#) Sample drawn from outside source.			
If Test results are alarming or unexpected, client is advised to contact the Customer Care immediately for possible remedial action.			
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