

Name : Mr. PURANJAY SINGH  
Lab No. : 435816023  
Ref By : SELF  
Collected : 6/4/2023 8:24:00AM  
A/c Status : P  
Collected at : LPL-NOIDA HOME VISIT  
NOIDA

Age : 19 Years  
Gender : Male  
Reported : 6/4/2023 12:32:31PM  
Report Status : Final  
Processed at : LPL-NOIDA LAB  
N-27, SECTOR-18, NOIDA - 201301



### Test Report

Test Name Results Units Bio. Ref. Interval

SwasthFit Super 4

#### COMPLETE BLOOD COUNT;CBC

(Photometry, Electrical Impedance, VCS Technology & Calculated)

Hemoglobin	13.80	g/dL	13.00 - 17.00
Packed Cell Volume (PCV)	40.90	%	40.00 - 50.00
RBC Count	5.16	mill/mm3	4.50 - 5.50
MCV	<b>79.20</b>	fL	83.00 - 101.00
MCH	<b>26.60</b>	pg	27.00 - 32.00
MCHC	33.60	g/dL	31.50 - 34.50
Red Cell Distribution Width (RDW)	<b>14.80</b>	%	11.60 - 14.00
Total Leukocyte Count (TLC)	7.20	thou/mm3	4.00 - 10.00
<b>Differential Leucocyte Count (DLC)</b>			
Segmented Neutrophils	59.50	%	40.00 - 80.00
Lymphocytes	27.70	%	20.00 - 40.00
Monocytes	9.10	%	2.00 - 10.00
Eosinophils	3.00	%	1.00 - 6.00
Basophils	0.70	%	<2.00
<b>Absolute Leucocyte Count</b>			
Neutrophils	4.28	thou/mm3	2.00 - 7.00
Lymphocytes	1.99	thou/mm3	1.00 - 3.00
Monocytes	0.66	thou/mm3	0.20 - 1.00
Eosinophils	0.22	thou/mm3	0.02 - 0.50
Basophils	0.05	thou/mm3	0.02 - 0.10
Platelet Count	290	thou/mm3	150.00 - 410.00
Mean Platelet Volume	7.3	fL	6.5 - 12.0

#### Note



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1. 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			
2. Test conducted on EDTA whole blood			



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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
<b>LIVER &amp; KIDNEY PANEL, SERUM</b>			
Creatinine (Modified jaffe, IDMS traceable )	0.97	mg/dL	0.70 - 1.30
GFR Estimated	115	mL/min/1.73m2	>59
GFR Category	G1		
Urea (Urease UV)	29.00	mg/dL	13.00 - 43.00
Urea Nitrogen Blood	13.54	mg/dL	6.00 - 20.00
BUN/Creatinine Ratio	14		
Uric Acid (Uricase/peroxidase )	4.90	mg/dL	3.50 - 7.20
AST (SGOT) (IFCC without P5P)	25.0	U/L	15.00 - 40.00
ALT (SGPT) (IFCC without P5P)	21.0	U/L	10.00 - 49.00
GGTP (IFCC)	10.0	U/L	0 - 73
Alkaline Phosphatase (ALP) (IFCC, AMP BUFFER)	70.00	U/L	48.00 - 261.00
Bilirubin Total (Oxidation)	0.83	mg/dL	0.30 - 1.20
Bilirubin Direct (Oxidation)	0.30	mg/dL	<0.30
Bilirubin Indirect (Calculated)	0.53	mg/dL	<1.10
Total Protein (Biuret)	7.10	g/dL	5.70 - 8.20
Albumin (BCG)	4.30	g/dL	3.20 - 4.80
A : G Ratio (Calculated)	1.54		0.90 - 2.00
Globulin(Calculated)	2.80	gm/dL	2.0 - 3.5
Calcium, Total (Arsenazo III)	9.80	mg/dL	8.70 - 10.40



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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
Phosphorus (Phosphomolybdate, UV)	4.90	mg/dL	2.40 - 5.10
Sodium (Indirect ISE)	137.00	mEq/L	136.00 - 145.00
Potassium (Indirect ISE)	4.62	mEq/L	3.50 - 5.10
Chloride (Indirect ISE)	102.00	mEq/L	98.00 - 107.00

### Note

- Estimated GFR (eGFR) calculated using the 2021 CKD-EPI creatinine equation and GFR Category reported as per KDIGO guideline 2012.
- eGFR category G1 or G2 does not fulfil the criteria for CKD, in the absence of evidence of kidney damage
- The BUN-to-creatinine ratio is used to differentiate prerenal and postrenal azotemia from renal azotemia. Because of considerable variability, it should be used only as a rough guide. Normally, the BUN/creatinine ratio is about 10:1

### LIPID SCREEN, SERUM (CHO-POD)

Cholesterol, Total	123.00	mg/dL	<200.00
Triglycerides	77.00	mg/dL	<150.00
HDL Cholesterol	<b>34.20</b>	mg/dL	>40.00
LDL Cholesterol, Calculated	73.40	mg/dL	<100.00
VLDL Cholesterol, Calculated	15.40	mg/dL	<30.00
Non-HDL Cholesterol	89	mg/dL	<130

### Interpretation

REMARKS	TOTAL CHOLESTEROL in mg/dL	TRIGLYCERIDE in mg/dL	LDL CHOLESTEROL in mg/dL	NON HDL CHOLESTEROL in mg/dL
Optimal	<200	<150	<100	<130
Above Optimal	-	-	100-129	130 - 159
Borderline High	200-239	150-199	130-159	160 - 189





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### Test Report

Test Name	Results	Units	Bio. Ref. Interval
High	$\geq 240$	200-499	160-189
Very High	-	$\geq 500$	$\geq 190$

### 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.
- NLA-2014 recommends a complete lipoprotein profile as the initial test for evaluating cholesterol.
- Friedewald equation to calculate LDL cholesterol is most accurate when Triglyceride level is  $< 400$  mg/dL. Measurement of Direct LDL cholesterol is recommended when Triglyceride level is  $> 400$  mg/dL.
- NLA-2014 identifies Non HDL Cholesterol (an indicator of all atherogenic lipoproteins such as LDL, VLDL, IDL, Lp(a), Chylomicron remnants) along with LDL-cholesterol as co-primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL & Non HDL.
- Apolipoprotein B is an optional, secondary lipid target for treatment once LDL & Non HDL goals have been achieved.
- 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 2016

RISK CATEGORY	TREATMENT GOAL		CONSIDER THERAPY	
	LDL CHOLESTEROL (LDL-C) (mg/dL)	NON HDL CHOLESTEROL (NON HDL-C) (mg/dL)	LDL CHOLESTEROL (LDL-C) (mg/dL)	NON HDL CHOLESTEROL (NON HDL-C) (mg/dL)
Very High	$< 50$	$< 80$	$\geq 50$	$\geq 80$
High	$< 70$	$< 100$	$\geq 70$	$\geq 100$
Moderate	$< 100$	$< 130$	$\geq 100$	$\geq 130$
Low	$< 100$	$< 130$	$\geq 130^*$	$\geq 160^*$

\*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>HbA1c (GLYCOSYLATED HEMOGLOBIN), BLOOD</b> (HPLC, NGSP certified)			
HbA1c	5.2	%	4.00 - 5.60
Estimated average glucose (eAG)	103	mg/dL	

### Interpretation

HbA1c result is suggestive of non diabetic adults ( $\geq 18$  years)/ well controlled Diabetes in a known Diabetic

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

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

**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
<b>GLUCOSE, FASTING (F), PLASMA</b> (Hexokinase)			
Glucose Fasting	91.00	mg/dL	70.00 - 100.00

<b>THYROID PROFILE, TOTAL, SERUM</b> (Chemiluminescent Immunoassay)			
T3, Total	1.14	ng/mL	0.80 - 2.10
T4, Total	<b>4.60</b>	µg/dL	5.50 - 11.10
TSH	1.22	µIU/mL	0.70 - 6.40

### 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
VITAMIN B12; CYANOCOBALAMIN, SERUM (CLIA)	230.00	pg/mL	211.00 - 911.00

#### 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

VITAMIN D, 25 - HYDROXY, SERUM (Chemiluminescence)	131.43	nmol/L	75.00 - 250.00
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#### 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

#### Note

- The assay measures both D2 (Ergocalciferol) and D3 (Cholecalciferol) metabolites of vitamin D.
- 25 (OH)D is influenced by sunlight, latitude, skin pigmentation, sunscreen use and hepatic function.
- Optimal calcium absorption requires vitamin D 25 (OH) levels exceeding 75 nmol/L.





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<ul style="list-style-type: none"> <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>			

### Comments

Vitamin D promotes absorption of calcium and phosphorus and mineralization of bones and teeth. Deficiency in children causes Rickets and in adults leads to Osteomalacia. It can also lead to Hypocalcemia and Tetany. Vitamin D status is best determined by measurement of 25 hydroxy vitamin D, as it is the major circulating form and has longer half life (2-3 weeks) than 1,25 Dihydroxy vitamin D (5-8 hrs).

### Decreased Levels

- Inadequate exposure to sunlight
- Dietary deficiency
- Vitamin D malabsorption
- Severe Hepatocellular disease
- Drugs like Anticonvulsants
- Nephrotic syndrome

### Increased levels

Vitamin D intoxication



Dr Parul Joshi  
MD, Pathology  
Chief of Laboratory  
Dr Lal PathLabs Ltd



Dr Swati Singh  
MD, Pathology  
Chief of Laboratory  
Dr Lal PathLabs Ltd

-----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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