



Lab No. : MRD/03-04-2023/SR7484121
Patient Name : PRIYAKSHI SAHA
Age : 35 Y 3 M 17 D
Gender : F

Lab Add. : Newtown, Kolkata-700156
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date: 03/Apr/2023 11:30AM
Report Date : 03/Apr/2023 03:22PM



Test Name	Result	Unit	Bio Ref. Interval	Method
*CHLORIDE, BLOOD , .				
CHLORIDE,BLOOD	105	mEq/L	99-109 mEq/L	ISE INDIRECT
POTASSIUM, BLOOD , GEL SERUM				
POTASSIUM,BLOOD	3.70	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
THYROID PANEL (T3, T4, TSH) , GEL SERUM				
T3-TOTAL (TRI IODOTHYRONINE)	0.96	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	8.7	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	2.63	µIU/mL	0.55-4.78 µIU/mL	CLIA

Serum TSH levels exhibit a diurnal variation with the peak occurring during the night and the nadir, which approximates to 50% of the peak value, occurring between 1000 and 1600 hours.[1,2]

References:

- Bugalho MJ, Domingues RS, Pinto AC, Garrao A, Catarino AL, Ferreira T, Limbert E and Sobrinho L. Detection of thyroglobulin mRNA transcripts in peripheral blood of individuals with and without thyroid glands: evidence for thyroglobulin expression by blood cells. *Eur J Endocrinol* 2001;145:409-13.
- Bellantone R, Lombardi CP, Bossola M, Ferrante A, Princi P, Boscherini M et al. Validity of thyroglobulin mRNA assay in peripheral blood of postoperative thyroid carcinoma patients in predicting tumor recurrence varies according to the histologic type: results of a prospective study. *Cancer* 2001;92:2273-9.

BIOLOGICAL REFERENCE INTERVAL: [ONLY FOR PREGNANT MOTHERS]

Trimester specific TSH LEVELS during pregnancy:

FIRST TRIMESTER: 0.10 – 3.00 µ IU/mL

SECOND TRIMESTER: 0.20 -3.50 µ IU/mL

THIRD TRIMESTER : 0.30 -3.50 µ IU/mL

References:

- Erik K. Alexander, Elizabeth N. Pearce, Gregory A. Brent, Rosalind S. Brown, Herbert Chen, Chrysoula Dosiou, William A. Grobman, Peter Laurberg, John H. Lazarus, Susan J. Mandel, Robin P. Peeters, and Scott Sullivan. *Thyroid*. Mar 2017.315-389. <http://doi.org/10.1089/thy.2016.0457>
- Kalra S, Agarwal S, Aggarwal R, Ranabir S. Trimester-specific thyroid-stimulating hormone: An indian perspective. *Indian J Endocr Metab* 2018;22:1-4.

SODIUM, BLOOD , GEL SERUM

SODIUM,BLOOD 140 mEq/L 132 - 146 mEq/L ISE INDIRECT


GLUCOSE, FASTING , BLOOD, NAF PLASMA



Lab No. : SR7484121	Name : PRIYAKSHI SAHA	Age/G : 35 Y 3 M 17 D / F	Date : 03-04-2023
GLUCOSE,FASTING	87	mg/dL	Impaired Fasting-100-125 ~Diabetes- >= 126.~Fasting is defined as no caloric intake for at least 8 hours.
			Gluc Oxidase Trinder

In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference :
ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.



Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist



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TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .

TOTAL PROTEIN	7.90	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.5	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	3.40	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.32		1.0 - 2.5	Calculated

PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM

PHOSPHORUS-INORGANIC,BLOOD	3.0	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV
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UREA,BLOOD , GEL SERUM

UREA,BLOOD	21.4	mg/dL	19-49 mg/dL	Urease with GLDH
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URIC ACID, BLOOD , GEL SERUM

URIC ACID,BLOOD	6.00	mg/dL	2.6-6.0 mg/dL	Uricase/Peroxidase
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LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL	143	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	Enzymatic
TRIGLYCERIDES	153	mg/dL	Normal:: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	GPO-Trinder
HDL CHOLESTEROL	33	mg/dl	< 40 - Low 40-59- Optimum 60 - High	Elimination/catalase
LDL CHOLESTEROL DIRECT	99	mg/dL	OPTIMAL : <100 mg/dL, Near optimal/ above optimal : 100-129 mg/dL, Borderline high : 130-159 mg/dL, High : 160-189 mg/dL, Very high : >=190 mg/dL	Elimination / Catalase
VLDL	11	mg/dl	< 40 mg/dl	Calculated
CHOL HDL Ratio	4.3		LOW RISK 3.3-4.4 AVERAGE RISK 4.47-7.1 MODERATE RISK 7.1-11.0 HIGH RISK >11.0	Calculated

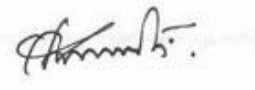
Reference: National Cholesterol Education Program. Executive summary of the third report of The National Cholesterol Education Program (NCEP) Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). JAMA. May 16 2001;285(19):2486-97.

CALCIUM, BLOOD

CALCIUM,BLOOD	9.10	mg/dL	8.7-10.4 mg/dL	Arsenazo III
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CREATININE, BLOOD

CREATININE,BLOOD	0.69	mg/dL	0.5-1.1 mg/dL	Jaffe, alkaline picrate, kinetic
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Dr. SUPARBA CHAKRABARTI
 MBBS, MD(BIOCHEMISTRY)
 Consultant Biochemist



Lab No. : SR7484121 Name : PRIYAKSHI SAHA Age/G : 35 Y 3 M 17 D / F Date : 03-04-2023

CBC WITH PLATELET (THROMBOCYTE) COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	12.1	g/dL	12 - 15	PHOTOMETRIC
WBC	7.6	*10 ³ /μL	4 - 10	DC detection method
RBC	4.18	*10 ⁶ /μL	3.8 - 4.8	DC detection method
PLATELET (THROMBOCYTE) COUNT	186	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	67	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	24	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	07	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	02	%	1 - 6 %	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP

HEMATOCRIT / PCV	36.4	%	36 - 46 %	Calculated
MCV	87.0	fl	83 - 101 fl	Calculated
MCH	28.8	pg	27 - 32 pg	Calculated
MCHC	33.2	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	15.2	%	11.6-14%	Calculated
PDW-PLATELET DISTRIBUTION WIDTH	27.0	fL	8.3 - 25 fL	Calculated
MPV-MEAN PLATELET VOLUME	12.8		7.5 - 11.5 fl	Calculated

DR. NEHA GUPTA
MD, DNB (Pathology)
Consultant Pathologist



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ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour	22	mm/hr	0.00 - 20.00 mm/hr	Westergren
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BLOOD GROUP ABO+RH [GEL METHOD] , EDTA WHOLE BLOOD

ABO	O			Gel Card
RH	POSITIVE			Gel Card

TECHNOLOGY USED: GEL METHOD

ADVANTAGES :

- Gel card allows simultaneous forward and reverse grouping.
- Card is scanned and record is preserved for future reference.
- Allows identification of Bombay blood group.
- Daily quality controls are run allowing accurate monitoring.

Historical records check not performed.

Dr. PANKTI PATEL
MBBS , MD (PATHOLOGY)
CONSULTANT PATHOLOGIST



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GLUCOSE, PP , BLOOD, NAF PLASMA

GLUCOSE,PP	110	mg/dL	Impaired Glucose Tolerance-140 to 199. Diabetes>= 200.
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The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75-g anhydrous glucose dissolved in water. In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference :
ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.

[PDF Attached](#)

GLYCATED HAEMOGLOBIN (HBA1C) , EDTA WHOLE BLOOD

GLYCATED HEMOGLOBIN (HBA1C)	5.1	%	***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***
HbA1c (IFCC)	32.0	mmol/mol	HPLC

Clinical Information and Laboratory clinical interpretation on Biological Reference Interval:

Low risk / Normal / non-diabetic : <5.7% (NGSP) / < 39 mmol/mol (IFCC)
 Pre-diabetes/High risk of Diabetes : 5.7%- 6.4% (NGSP) / 39 - < 48 mmol/mol (IFCC)
 Diabetics-HbA1c level : >/= 6.5% (NGSP) / > 48 mmol/mol (IFCC)

Analyzer used : Bio-Rad-VARIANT TURBO 2.0
Method : HPLC Cation Exchange

Recommendations for glycemic targets

- Ø Patients should use self-monitoring of blood glucose (SMBG) and HbA1c levels to assess glycemic control.
- Ø The timing and frequency of SMBG should be tailored based on patients' individual treatment, needs, and goals.
- Ø Patients should undergo HbA1c testing at least twice a year if they are meeting treatment goals and have stable glycemic control.
- Ø If a patient changes treatment plans or does not meet his or her glycemic goals, HbA1c testing should be done quarterly.
- Ø **For most adults who are not pregnant, HbA1c levels should be <7% to help reduce microvascular complications and macrovascular disease . Action suggested >8% as it indicates poor control.**
- Ø Some patients may benefit from HbA1c goals that are stringent.

Result alterations in the estimation has been established in many circumstances, such as after acute/ chronic blood loss, for example, after surgery, blood transfusions, hemolytic anemia, or high erythrocyte turnover; vitamin B₁₂/ folate deficiency, presence of chronic renal or liver disease; after administration of high-dose vitamin E / C; or erythropoietin treatment.

Reference: Glycated hemoglobin monitoring BMJ 2006; 333:586-8

References:

1. Chamberlain JJ, Rhinehart AS, Shaefer CF, et al. Diagnosis and management of diabetes: synopsis of the 2016 American Diabetes Association Standards of Medical Care in Diabetes. *Ann Intern Med.* Published online 1 March 2016. doi:10.7326/M15-3016.
2. Mosca A, Goodall I, Hoshino T, Jeppsson JO, John WG, Little RR, Miedema K, Myers GL, Reinauer H, Sacks DB, Weykamp CW. International Federation of Clinical Chemistry and Laboratory Medicine, IFCC Scientific Division. Global standardization of glycated hemoglobin measurement: the position of the IFCC Working Group. *Clin Chem Lab Med.* 2007;45(8):1077-1080.

DR. ANANNYA GHOSH
MBBS, MD (Biochemistry)
Consultant Biochemist

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DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA

HEART RATE : 82 bpm
PR INTERVAL : 146 ms
QRS DURATION : 82 ms
QT INTERVAL : 384 ms
QTC INTERVAL : 448 ms

AXIS

P WAVE : 45 degree
QRS WAVE : 39 degree
T WAVE : 21 degree

IMPRESSION : **Normal sinus rhythm.**
Normal ECG.

□

ACRay

Dr. A C RAY
Department of Non-invasive
Cardiology

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X-RAY REPORT OF CHEST (PA)

FINDINGS :

No active lung parenchymal lesion is seen.
Both the hila are normal in size, density and position.
Mediastinum is in central position. Trachea is in midline.
Domes of diaphragm are smoothly outlined. Position is within normal limits.
Lateral costo-phrenic angles are clear.
The cardio-thoracic ratio is normal.
Bony thorax reveals no definite abnormality.

IMPRESSION :

Normal study.


Dr. Anoop Sastry
MBBS, DMRT(CAL)
CONSULTANT RADIOLOGIST
Registration No.: WB-36628

Patient Data

Sample ID: C02135106379
 Patient ID: SR7484121
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 03/APR/2023 14:16:20
 Injection Number: 9886U
 Run Number: 218
 Rack ID: 0004
 Tube Number: 7
 Report Generated: 03/APR/2023 14:25:59
 Operator ID: ASIT

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.0	0.159	12598
A1b	---	1.1	0.220	13873
F	---	0.7	0.270	8816
LA1c	---	1.7	0.394	22153
A1c	5.1	---	0.498	51831
P3	---	3.2	0.778	41878
P4	---	1.1	0.860	13819
Ao	---	87.4	0.993	1147102

Total Area: 1,312,069

HbA1c (NGSP) = 5.1 % HbA1c (IFCC) = 32 mmol/mol

