



Lab No. : BAR/25-02-2023/SR7338795
Patient Name : ANIMESH SARKAR
Age : 35 Y 11 M 18 D
Gender : M

Lab Add. : Newtown, Kolkata-700156
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date: 25/Feb/2023 10:55AM
Report Date : 25/Feb/2023 04:03PM



Test Name	Result	Unit	Bio Ref. Interval	Method
UREA,BLOOD , GEL SERUM	23.5	mg/dL	19-49 mg/dL	Urease with GLDH
ALKALINE PHOSPHATASE , GEL SERUM				
ALKALINE PHOSPHATASE	63.00	U/L	46-116 U/L	IFCC standardization
BILIRUBIN (TOTAL) , GEL SERUM				
BILIRUBIN (TOTAL)	0.70	mg/dL	0.3-1.2 mg/dL	Vanadate oxidation
SGOT/AST , GEL SERUM				
SGOT/AST	26.00	U/L	13-40 U/L	Modified IFCC
SODIUM, BLOOD , GEL SERUM				
SODIUM,BLOOD	140.00	mEq/L	132 - 146 mEq/L	ISE INDIRECT
*CHLORIDE, BLOOD , .				
CHLORIDE,BLOOD	104.00	mEq/L	99-109 mEq/L	ISE INDIRECT
CREATININE, BLOOD	1.08	mg/dL	0.7-1.3 mg/dL	Jaffe, alkaline picrate, kinetic
URIC ACID, BLOOD , GEL SERUM				
URIC ACID,BLOOD	7.00	mg/dL	3.5-7.2 mg/dL	Uricase/Peroxidase
BILIRUBIN (DIRECT) , GEL SERUM				
BILIRUBIN (DIRECT)	0.10	mg/dL	<0.2 mg/dL	Vanadate oxidation
POTASSIUM, BLOOD , GEL SERUM				
POTASSIUM,BLOOD	4.40	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
GLUCOSE, FASTING , BLOOD, NAF PLASMA				
GLUCOSE,FASTING	86	mg/dL	Impaired Fasting-100-125 ~Diabetes- >= 126.~Fasting is defined as no caloric intake for at least 8 hours.	Gluc Oxidase Trinder
<i>In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.</i>				
<i>Reference : ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.</i>				
PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM				
PHOSPHORUS-INORGANIC,BLOOD	2.6	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV



Suraksha
DIAGNOSTICS

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Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist



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CALCIUM, BLOOD

CALCIUM,BLOOD 9.40 mg/dL 8.7-10.4 mg/dL Arsenazo III

SGPT/ALT , GEL SERUM

SGPT/ALT **41.00** U/L 7-40 U/L Modified IFCC

THYROID PANEL (T3, T4, TSH) , GEL SERUM

T3-TOTAL (TRI IODOTHYRONINE) 1.21 ng/ml 0.60-1.81 ng/ml CLIA
 T4-TOTAL (THYROXINE) 8.4 µg/dL 3.2-12.6 µg/dL CLIA
 TSH (THYROID STIMULATING HORMONE) 2.60 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.

LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL 209.00 mg/dL Desirable: < 200 mg/dL Enzymatic
 Borderline high: 200-239 mg/dL
 High: > or =240 mg/dL
 TRIGLYCERIDES **188.00** mg/dL Normal:: < 150, GPO-Trinder
 BorderlineHigh::150-199,
 High:: 200-499,
 VeryHigh::>500
 HDL CHOLESTEROL **39.00** mg/dl < 40 - Low Elimination/catalase
 40-59- Optimum
 60 - High
 LDL CHOLESTEROL DIRECT **167.0** mg/dL OPTIMAL : <100 mg/dL, Elimination / Catalase
 Near optimal/ above optimal :
 100-129 mg/dL,
 Borderline high : 130-159 mg/dL,

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VLDL	3	mg/dl	High : 160-189 mg/dL, Very high : >=190 mg/dL < 40 mg/dl	Calculated
CHOL HDL Ratio	5.4		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.

TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .

TOTAL PROTEIN	7.10	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.7	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	2.40	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.96		1.0 - 2.5	Calculated

Dr. SUPARBA CHAKRABARTI
MBBS, MD(BIOCHEMISTRY)
Consultant Biochemist



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CBC WITH PLATELET & RETICULOCYTE COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	15.6	g/dL	13 - 17	PHOTOMETRIC
WBC	8.2	*10 ³ /μL	4 - 10	DC detection method
RBC	5.34	*10 ⁶ /μL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	165	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	62	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	29	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	05	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	04	%	1-6%	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP 1

HEMATOCRIT / PCV	43.3	%	40 - 50 %	Calculated
MCV	81.1	fl	83 - 101 fl	Calculated
MCH	29.2	pg	27 - 32 pg	Calculated
MCHC	36.1	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	14.8	%	11.6-14%	Calculated
RETICULOCYTE COUNT-AUTOMATED,BLOOD	0.9	%	0.5-2.5%	Cell Counter/Microscopy

BLOOD GROUP ABO+RH [GEL METHOD] , EDTA WHOLE BLOOD

ABO	B	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.

ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour	05	mm/hr	0.00 - 20.00 mm/hr	Westergren
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URINE ROUTINE ALL, ALL , URINE

PHYSICAL EXAMINATION

COLOUR	PALE YELLOW
APPEARANCE	SLIGHTLY HAZY

CHEMICAL EXAMINATION

pH	5.0	4.6 - 8.0	Dipstick (triple indicator method)
SPECIFIC GRAVITY	1.020	1.005 - 1.030	Dipstick (ion concentration method)
PROTEIN	NOT DETECTED	NOT DETECTED	Dipstick (protein error of pH indicators)/Manual
GLUCOSE	NOT DETECTED	NOT DETECTED	Dipstick(glucose-oxidase-peroxidase method)/Manual
KETONES (ACETOACETIC ACID, ACETONE)	NOT DETECTED	NOT DETECTED	Dipstick (Legals test)/Manual
BLOOD	NOT DETECTED	NOT DETECTED	Dipstick (pseudoperoxidase reaction)
BILIRUBIN	NEGATIVE	NEGATIVE	Dipstick (azo-diazo reaction)/Manual

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UROBILINOGEN	NEGATIVE	NEGATIVE	Dipstick (diazonium ion reaction)/Manual
NITRITE	NEGATIVE	NEGATIVE	Dipstick (Griess test)
LEUCOCYTE ESTERASE	NEGATIVE	NEGATIVE	Dipstick (ester hydrolysis reaction)

MICROSCOPIC EXAMINATION

LEUKOCYTES (PUS CELLS)	0-1	/hpf	0-5	Microscopy
EPITHELIAL CELLS	0-1	/hpf	0-5	Microscopy
RED BLOOD CELLS	NOT DETECTED	/hpf	0-2	Microscopy
CAST	NOT DETECTED		NOT DETECTED	Microscopy
CRYSTALS	NOT DETECTED		NOT DETECTED	Microscopy
BACTERIA	NOT DETECTED		NOT DETECTED	Microscopy
YEAST	NOT DETECTED		NOT DETECTED	Microscopy

Note:

- All urine samples are checked for adequacy and suitability before examination.
- Analysis by urine analyzer of dipstick is based on reflectance photometry principle. Abnormal results of chemical examinations are confirmed by manual methods.
- The first voided morning clean-catch midstream urine sample is the specimen of choice for chemical and microscopic analysis.
- Negative nitrite test does not exclude urinary tract infections.
- Trace proteinuria can be seen in many physiological conditions like exercise, pregnancy, prolonged recumbency etc.
- False positive results for glucose, protein, nitrite, urobilinogen, bilirubin can occur due to use of certain drugs, therapeutic dyes, ascorbic acid, cleaning agents used in urine collection container.
- Discrepancy between results of leukocyte esterase and blood obtained by chemical methods with corresponding pus cell and red blood cell count by microscopy can occur due to cell lysis.
- Contamination from perineum and vaginal discharge should be avoided during collection, which may falsely elevate epithelial cell count and show presence of bacteria and/or yeast in the urine.

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



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URIC ACID, URINE, SPOT URINE

URIC ACID, SPOT URINE 70.00 mg/dL 37-92 mg/dL URICASE

GLUCOSE, PP , BLOOD, NAF PLASMA

GLUCOSE,PP 93 mg/dL Impaired Glucose Tolerance-140 to 199. Diabetes>= 200. Gluc Oxidase Trinder

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) 5.6 % ***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***

HbA1c (IFCC) 38.0 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.



Suraksha
DIAGNOSTICS

Lab No. : SR7338795

Name : ANIMESH SARKAR

Age/G : 35 Y 11 M 18 D / M

Date : 25-02-2023

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

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Report Date : 25/Feb/2023 04:45PM



ECHO CARDIOGRAPHY- PLAIN

M MODE DATA :

PARAMETER	TEST VALUE	NORMAL RANGE
Aortic root diameter	3.27	2.0 - 4.0cm
Left atrial diameter	3.09	2.0 - 4.0cm
RV internal diameter	1.30	0.6 - 2.3cm
IV septal thickness (diastole)	0.99	0.60 - 1.10cm
LV internal diameter (diastole)	5.39	3.50 - 5.60cm
Post wall thickness (diastole)	0.90	0.60 - 1.10cm
LV internal diameter (systole)	3.36	2.40 - 4.20cm
LV Ejection fraction	65 %	55 - 75%

1) Left Ventricle :

Cavity size and wall thickness: Within normal limits.

LV wall motion study : No regional wall motion abnormality.

Systolic function : Good.

Diastolic compliance : **Adequate**

2) Left Atrium :

Normal size, no mass in the appendage / body.

3) Right Ventricle and Right Atrium :

Normal size, good RV systolic function.

4) Mitral Valve :

Normal leaflets, good excursion, normal subvalvar apparatus.

Atrial regurgitation.

5) Aortic Valve :

Three cusps- no thickening, good systolic excursion.

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No significant regurgitation noted.

6) Tricuspid Valve :

Normal leaflets, normal sized annulus, no significant regurgitation.

7) Pulmonary Valve :

Normal cusps, good systolic excursion.

8) Ventricular Septum :

Intact.

9) Inter atrial septum :

Intact.

10) Pericardium :

No thickening, no effusion.

11) Others :

No intra-cardiac mass.

CONCLUSION :

Good left ventricular systolic function with adequate diastolic compliance.

No pulmonary arterial hypertension.

ACRay

Dr. A C RAY

Department of Non-invasive
Cardiology

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Report Date : 25/Feb/2023 05:00PM



DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA

HEART RATE	:	83 bpm
PR INTERVAL	:	120 ms
QRS DURATION	:	102 ms
QT INTERVAL	:	330 ms
QTC INTERVAL	:	388 ms

AXIS

P WAVE	:	59 degree
QRS WAVE	:	49 degree
T WAVE	:	24 degree

IMPRESSION :

Sinus rhythm.
Normal ECG.

□

ACRay

Dr. A C RAY
Department of Non-invasive
Cardiology

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Report Date : 25/Feb/2023 03:21PM



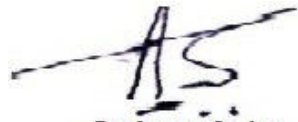
X-RAY REPORT OF CHEST (PA)

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: C02135002405
 Patient ID: SR7338795
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 25/FEB/2023 15:39:59
 Injection Number: 5009U
 Run Number: 106
 Rack ID: 0003
 Tube Number: 1
 Report Generated: 25/FEB/2023 15:49:07
 Operator ID: ASIT

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	0.9	0.155	15281
A1b	---	1.3	0.214	21950
F	---	0.7	0.267	12743
LA1c	---	1.7	0.392	30331
A1c	5.6	---	0.495	78796
P3	---	3.4	0.780	59837
P4	---	1.2	0.860	21659
Ao	---	86.2	0.994	1497028

Total Area: 1,737,624

HbA1c (NGSP) = 5.6 % HbA1c (IFCC) = 38 mmol/mol

