



Lab No. : JAD/11-02-2023/SR7282418
 Patient Name : SYED IMRAN
 Age : 29 Y 6 M 27 D
 Gender : M

Lab Add. : Newtown, Kolkata-700156
 Ref Dr. : Dr.MEDICAL OFFICER
 Collection Date: 11/Feb/2023 10:03AM
 Report Date : 11/Feb/2023 03:03PM



Test Name	Result	Unit	Bio Ref. Interval	Method
SGOT/AST , GEL SERUM				
SGOT/AST	29.00	U/L	13-40 U/L	Modified IFCC
POTASSIUM, BLOOD , GEL SERUM				
POTASSIUM,BLOOD	4.10	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
*CHLORIDE, BLOOD , .				
CHLORIDE,BLOOD	103.00	mEq/L	99-109 mEq/L	ISE INDIRECT
UREA,BLOOD , GEL SERUM				
UREA,BLOOD	23.5	mg/dL	19-49 mg/dL	Urease with GLDH
CREATININE, BLOOD				
CREATININE,BLOOD	1.06	mg/dL	0.7-1.3 mg/dL	Jaffe, alkaline picrate, kinetic
URIC ACID, BLOOD , GEL SERUM				
URIC ACID,BLOOD	6.10	mg/dL	3.5-7.2 mg/dL	Uricase/Peroxidase
SODIUM, BLOOD , GEL SERUM				
SODIUM,BLOOD	140.00	mEq/L	132 - 146 mEq/L	ISE INDIRECT
BILIRUBIN (TOTAL) , GEL SERUM				
BILIRUBIN (TOTAL)	1.00	mg/dL	0.3-1.2 mg/dL	Vanadate oxidation

□

Dr NEEPA CHOWDHURY
 MBBS MD (Biochemistry)
 Consultant Biochemist



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CBC WITH PLATELET (THROMBOCYTE) COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	16.5	g/dL	13 - 17	PHOTOMETRIC
WBC	8.3	*10 ³ /μL	4 - 10	DC detection method
RBC	6.01	*10 ⁶ /μL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	241	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	71	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	23	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	04	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	02	%	1-6%	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP

HEMATOCRIT / PCV	49.0	%	40 - 50 %	Calculated
MCV	81.5	fl	83 - 101 fl	Calculated
MCH	27.4	pg	27 - 32 pg	Calculated
MCHC	33.6	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	14.9	%	11.6-14%	Calculated
PDW-PLATELET DISTRIBUTION WIDTH	28.5	fL	8.3 - 25 fL	Calculated
MPV-MEAN PLATELET VOLUME	9		7.5 - 11.5 fl	Calculated

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	PRESENT(+)	NOT DETECTED	Dipstick (pseudoperoxidase reaction)
BILIRUBIN	NEGATIVE	NEGATIVE	Dipstick (azo-diazo reaction)/Manual
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)	1-2	/hpf	0-5	Microscopy
EPITHELIAL CELLS	1-2	/hpf	0-5	Microscopy
RED BLOOD CELLS	2-3	/hpf	0-2	Microscopy
CAST	NOT DETECTED		NOT DETECTED	Microscopy
CRYSTALS	NOT DETECTED		NOT DETECTED	Microscopy
BACTERIA	SCANTY		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.

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3. The first voided morning clean-catch midstream urine sample is the specimen of choice for chemical and microscopic analysis.
4. Negative nitrite test does not exclude urinary tract infections.
5. Trace proteinuria can be seen in many physiological conditions like exercise, pregnancy, prolonged recumbency etc.
6. 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.
7. 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.
8. 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.

CBC WITH PLATELET & RETICULOCYTE COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	16.5	g/dL	13 - 17	PHOTOMETRIC
WBC	8.3	*10 ³ /μL	4 - 10	DC detection method
RBC	6.01	*10 ⁶ /μL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	241	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	71	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	23	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	04	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	02	%	1-6%	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP 1

HEMATOCRIT / PCV	49.0	%	40 - 50 %	Calculated
MCV	81.5	fl	83 - 101 fl	Calculated
MCH	27.4	pg	27 - 32 pg	Calculated
MCHC	33.6	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	14.9	%	11.6-14%	Calculated
RETICULOCYTE COUNT- AUTOMATED,BLOOD	1.4	%	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.

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



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BILIRUBIN (DIRECT) , GEL SERUM

BILIRUBIN (DIRECT) 0.30 mg/dL <0.2 mg/dL Vanadate oxidation

CALCIUM, BLOOD

CALCIUM,BLOOD 9.70 mg/dL 8.7-10.4 mg/dL Arsenazo III

LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL 145.00 mg/dL Desirable: < 200 mg/dL, Borderline high: 200-239 mg/dL, High: > or =240 mg/dL Enzymatic

TRIGLYCERIDES 126.00 mg/dL Normal: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh:: >500 GPO-Trinder

HDL CHOLESTEROL 32.00 mg/dl < 40 - Low, 40-59- Optimum, 60 - High Elimination/catalase

LDL CHOLESTEROL DIRECT 108.0 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 5 mg/dl < 40 mg/dl Calculated

CHOL HDL Ratio 4.5 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.

[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;



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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.

ALKALINE PHOSPHATASE , GEL SERUM

ALKALINE PHOSPHATASE	138.00	U/L	46-116 U/L	IFCC standardization
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SGPT/ALT , GEL SERUM

SGPT/ALT	58.00	U/L	7-40 U/L	Modified IFCC
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TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .

TOTAL PROTEIN	7.30	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.6	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	2.70	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.70		1.0 - 2.5	Calculated

URIC ACID, URINE, SPOT URINE

URIC ACID, SPOT URINE	81.00	mg/dL	37-92 mg/dL	URICASE
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GLUCOSE, PP , BLOOD, NAF PLASMA

GLUCOSE,PP	91	mg/dL	Impaired Glucose Tolerance-140 to 199. Diabetes>= 200.	Gluc Oxidase Trinder
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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.

GLUCOSE, FASTING , BLOOD, NAF PLASMA

GLUCOSE,FASTING	82	mg/dL	Impaired Fasting-100-125 . Diabetes- >= 126. Fasting is defined as no caloric intake for at least 8 hours.	Gluc Oxidase Trinder
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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.

PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM

PHOSPHORUS-INORGANIC,BLOOD	2.5	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV
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THYROID PANEL (T3, T4, TSH) , GEL SERUM

T3-TOTAL (TRI IODOTHYRONINE)	1.25	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	10.0	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	2.72	µIU/mL	0.55-4.78 µIU/mL	CLIA



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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:

1. 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.
2. 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:

1. 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>
2. Kalra S, Agarwal S, Aggarwal R, Ranabir S. Trimester-specific thyroid-stimulating hormone: An indian perspective. *Indian J Endocr Metab* 2018;22:1-4.

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



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ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour 04 mm/hr 0.00 - 20.00 mm/hr Westergren

DR. A. SHARMA
MBBS. MD (Path)
DM (Hematopathology)
PGIMER Chandigarh
Consultant Hematopathologist

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X-RAY REPORT OF CHEST (PA) VIEW


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. J Sen
MD Consultant, Radiologist

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DEPARTMENT OF ULTRASONOGRAPHY
REPORT ON EXAMINATION OF WHOLE ABDOMEN

LIVER

Liver is normal in size with smooth margins. Parenchymal echotexture of both lobes are normal. No focal mass lesion is seen in liver. Intrahepatic biliary radicals are not dilated. Portal vein branches and hepatic veins are normal.

PORTA

Portal vein is normal in caliber measures 9 mm. Common bile duct is not dilated (3 mm). No intraluminal calculus or soft tissue is seen in CBD.

GALL BLADDER

Gall bladder is normal in size, shape. No intraluminal calculus or mass is seen. Gall bladder wall is normal in thickness. No pericholecystic fluid collection noted.

PANCREAS

Pancreas is normal in size, shape and contour. Parenchymal echogenicity is normal and homogeneous. No focal mass or calcification seen. Main pancreatic duct is not dilated. No peripancreatic fluid collection or pseudocyst noted.

SPLEEN

Spleen is normal in size (118 mm), shape, position. Echotexture is normal. No focal lesion is noted. Splenic vein at splenic hilum is normal in caliber. No collateral seen.

KIDNEYS

Both the kidneys are normal in size, shape and position. Cortical echogenicity and cortical thickness of both kidneys are normal. Cortico-medullary differentiation is maintained. No calculus, mass or hydronephrosis is seen in either kidneys.

Right kidney measures : 102 mm

Left kidney measures : 101 mm.

URETERS

Ureters are not dilated.

URINARY BLADDER

Urinary bladder is distended, wall thickness appeared normal. No intraluminal calculi / mass could

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be detected.

PROSTATE

Prostate is normal in size. Echotexture appears within normal limits. No focal lesion is seen.

It measures : 30 mm x 30 mm x 28 mm.

Approximate weight - 13 gms.

RETROPERITONEUM & PERITONEUM

The aorta and IVC are normal. No enlarged lymph nodes are noted in the retroperitoneum. No free fluid is seen in peritoneum.

IMPRESSION:- Normal study.

Kindly note:-

* ***Ultrasound is not the modality of choice to rule out subtle bowel lesion.***


* ***Please Intimate us for any typing mistakes and send the report for correction within 7 days.***

* ***The science of Radiological diagnosis is based on the interpretation of various shadows produced by both the normal and abnormal tissues and are not always conclusive. Further biochemical and radiological investigation & clinical correlation is required to enable the clinician to reach the final diagnosis.***

The report and films are not valid for medico-legal purpose.

Patient Identity not verified

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Dr. J Sen
MD Consultant, Radiologist

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E.C.G. REPORT

DATA	
HEART RATE	76 Bpm
PR INTERVAL	120 Ms
QRS DURATION	88 Ms
QT INTERVAL	352 Ms
QTC INTERVAL	405 Ms
AXIS	Normal
P WAVE	-- Degree
QRS WAVE	32 Degree
T WAVE	19 Degree
IMPRESSION	: Normal sinus rhythm.

Patient Data

Sample ID: C02135031408
 Patient ID: SR7282418
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 11/FEB/2023 14:47:09
 Injection Number: 2113U
 Run Number: 53
 Rack ID: 0007
 Tube Number: 10
 Report Generated: 11/FEB/2023 14:53:04
 Operator ID: ASIT

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.1	0.154	19360
A1b	---	1.2	0.216	21822
F	---	0.7	0.270	13286
LA1c	---	1.6	0.399	29026
A1c	5.1	---	0.506	73570
P3	---	3.3	0.787	58835
P4	---	1.2	0.867	20756
Ao	---	86.8	0.997	1551889

Total Area: 1,788,545

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

