



Lab No. : DUN/24-02-2023/SR7333945
Patient Name : RAHUL DAS
Age : 30 Y 7 M 22 D
Gender : M

Lab Add. : Newtown, Kolkata-700156
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date: 24/Feb/2023 09:47AM
Report Date : 24/Feb/2023 01:18PM



Test Name	Result	Unit	Bio Ref. Interval	Method
BILIRUBIN (TOTAL) , GEL SERUM				
BILIRUBIN (TOTAL)	0.80	mg/dL	0.3-1.2 mg/dL	Vanadate oxidation
SODIUM, BLOOD , GEL SERUM				
SODIUM,BLOOD	140.00	mEq/L	132 - 146 mEq/L	ISE INDIRECT
*CHLORIDE, BLOOD , .				
CHLORIDE,BLOOD	105.00	mEq/L	99-109 mEq/L	ISE INDIRECT
CREATININE, BLOOD , GEL SERUM				
CREATININE,BLOOD	0.90	mg/dL	0.7-1.3 mg/dL	Jaffe, alkaline picrate, kinetic
PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM				
PHOSPHORUS-INORGANIC,BLOOD	3.0	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV
URIC ACID, BLOOD , GEL SERUM				
URIC ACID,BLOOD	8.00	mg/dL	3.5-7.2 mg/dL	Uricase/Peroxidase
ALKALINE PHOSPHATASE , GEL SERUM				
ALKALINE PHOSPHATASE	93.00	U/L	46-116 U/L	IFCC standardization
UREA,BLOOD				
UREA,BLOOD	36.4	mg/dL	19-49 mg/dL	Urease with GLDH
POTASSIUM, BLOOD , GEL SERUM				
POTASSIUM,BLOOD	4.30	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
SGOT/AST , GEL SERUM				
SGOT/AST	33.00	U/L	13-40 U/L	Modified IFCC
BILIRUBIN (DIRECT) , GEL SERUM				
BILIRUBIN (DIRECT)	0.20	mg/dL	<0.2 mg/dL	Vanadate oxidation
GLUCOSE, FASTING , BLOOD, NAF PLASMA				
GLUCOSE,FASTING	91	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.



Suraksha
DIAGNOSTICS

Lab No. : SR7333945

Name : RAHUL DAS

Age/G : 30 Y 7 M 22 D / M

Date : 24-02-2023

Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist



Lab No. : SR7333945 Name : RAHUL DAS Age/G : 30 Y 7 M 22 D / M Date : 24-02-2023

ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour 08 mm/hr 0.00 - 20.00 mm/hr Westergren

URINE ROUTINE ALL, ALL , URINE

PHYSICAL EXAMINATION

COLOUR PALE YELLOW
APPEARANCE SLIGHTLY HAZY

CHEMICAL EXAMINATION

pH	6.5	4.6 - 8.0	Dipstick (triple indicator method)
SPECIFIC GRAVITY	1.010	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
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.

CBC WITH PLATELET & RETICULOCYTE COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	14.9	g/dL	13 - 17	PHOTOMETRIC
WBC	7.2	*10 ³ /μL	4 - 10	DC detection method
RBC	6.10	*10 ⁶ /μL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	182	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	58	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	32	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	07	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	03	%	1-6%	Flowcytometry/Microscopy

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BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy
<u>CBC SUBGROUP 1</u>				
HEMATOCRIT / PCV	41.2	%	40 - 50 %	Calculated
MCV	67.5	fl	83 - 101 fl	Calculated
MCH	24.4	pg	27 - 32 pg	Calculated
MCHC	36.1	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	15.6	%	11.6-14%	Calculated
RETICULOCYTE COUNT-AUTOMATED,BLOOD	2.2	%	0.5-2.5%	Cell Counter/Microscopy

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



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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



Lab No. : SR7333945 Name : RAHUL DAS Age/G : 30 Y 7 M 22 D / M Date : 24-02-2023

SGPT/ALT , GEL SERUM

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

URIC ACID, URINE, SPOT URINE

URIC ACID, SPOT URINE 21.00 mg/dL 37-92 mg/dL URICASE

ESTIMATED TWICE

[PDF Attached](#)

GLYCATED HAEMOGLOBIN (HBA1C) , EDTA WHOLE BLOOD

GLYCATED HEMOGLOBIN (HBA1C) 5.2 %
 ***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***

HbA1c (IFCC) 33.0 mmol/mol HPLC

RECOMMENDED FOR Hb-TYPING TO RULE OUT ANY HEMOGLOBINOPATHY WHICH MAY INTERFERE WITH THE TRUE VALUE OF HbA1C.

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, Shafer 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.

LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL 200.00 mg/dL Desirable: < 200 mg/dL Enzymatic
 Borderline high: 200-239 mg/dL
 High: > or =240 mg/dL

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TRIGLYCERIDES	127.00	mg/dL	Normal: < 150, BorderlineHigh::150-199, High: 200-499, VeryHigh::>500 GPO-Trinder
HDL CHOLESTEROL	37.00	mg/dl	< 40 - Low 40-59- Optimum 60 - High Elimination/catalase
LDL CHOLESTEROL DIRECT	157.0	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	6	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	6.90	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.4	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	2.50	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.76		1.0 - 2.5	Calculated

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

T3-TOTAL (TRI IODOTHYRONINE)	1.34	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	11.9	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	1.80	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>



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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.

CALCIUM, BLOOD

CALCIUM,BLOOD	8.80	mg/dL	8.7-10.4 mg/dL	Arsenazo III
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DR. ANANNYA GHOSH
MBBS, MD (Biochemistry)
Consultant Biochemist

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Ref Dr. : Dr.MEDICAL OFFICER
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DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA	
HEART RATE	57 Bpm
PR INTERVAL	158 Ms
QRS DURATION	94 Ms
QT INTERVAL	392 Ms
QTC INTERVAL	384 Ms
AXIS	
P WAVE	47 Degree
QRS WAVE	41 Degree
T WAVE	25 Degree
IMPRESSION	: Sinus bradycardia otherwise normal ecg.

ACR

Dr. A C RAY
Department of Non-invasive
Cardiology

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Lab Add. :
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date:
Report Date : 24/Feb/2023 03:00PM



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

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DEPARTMENT OF ULTRASONOGRAPHY

REPORT ON EXAMINATION OF WHOLE ABDOMEN

LIVER: It is mildly enlarged in size (15.19 cm) with grade I fatty changes. No focal lesion of altered echogenicity is seen. Intrahepatic biliary radicles are not dilated. The portal vein branches and hepatic veins are normal.

GALL BLADDER: Well distended lumen shows no intraluminal calculus or mass. Wall thickness is normal. No pericholecystic collection is noted.

PORTA HEPATIS: The portal vein (0.88 cm) is normal in caliber with clear lumen. The common bile duct is normal in caliber. Visualized lumen is clear till visualised extent. Common bile duct measures approx 0.42 cm in diameter. *Extreme lower end of common bile duct is not visualised due to bowel gas shadow.*

PANCREAS: It is normal in shape, size and echopattern. Main pancreatic duct is not dilated. No focal lesion of altered echogenicity is seen. The peripancreatic region shows no abnormal fluid collection.

SPLEEN: It is normal in shape, size (9.90 cm) and shows homogeneous echopattern. No focal lesion is seen. No abnormal venous dilatation is seen in the splenic hilum.

KIDNEYS: Both Kidneys are normal in shape, size and position. Cortical echogenicity and thickness are normal with normal cortico-medullary differentiation in both kidneys. No calculus, hydronephrosis or mass is noted. The perinephric region shows no abnormal fluid collection.

RIGHT KIDNEY measures 9.70 cm **LEFT KIDNEY** measures 10.33 cm

URETER: Both ureters are not dilated. No calculus is noted in either side.

PERITONEUM & RETROPERITONEUM: The aorta and IVC are normal. Lymph nodes are not enlarged. No free fluid is seen in peritoneum.

URINARY BLADDER: It is adequately distended providing optimum scanning window. The lumen is clear and wall thickness is normal.

PROSTATE: It is normal in shape, size and echopattern. No focal lesion is seen. Capsule is smooth.

Prostate measures : 2.46 x 3.34 x 3.20 cm. Weight 13.76 gms.

IMPRESSION:

Mild hepatomegaly with grade I fatty changes in liver.

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Please correlate clinically.

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



DR. NAMRATA CHATTERJEE
MBBS,CONSULTANT SONOLOGIST
Reg No : 79092

Patient Data

Sample ID: C02135979851
 Patient ID: SR7333945
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 24/FEB/2023 13:11:23
 Injection Number: 4784U
 Run Number: 100
 Rack ID: 0003
 Tube Number: 6
 Report Generated: 24/FEB/2023 13:27:51
 Operator ID: ANAMIKA

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	0.9	0.156	16299
A1b	---	0.7	0.214	12742
F	---	0.9	0.279	16522
LA1c	---	1.3	0.390	23216
A1c	5.2	---	0.498	50573
P3	---	4.2	0.803	74948
Ao	---	58.4	1.000	1040119
Variant Window	---	30.7	1.090	546004

Total Area: 1,780,423

HbA1c (NGSP) = 5.2 % HbA1c (IFCC) = 33 mmol/mol

