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COLLEGE of AMERICAN PATHOLOGISTS

Suraksha DIAGNOSTICS

Lab No.	: PHL/21-02-2023/SR7321848	**Lab Add.**	: Newtown, Kolkata-700156
Patient Name	: **SAYAN SAHA**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 33 Y 2 M 11 D	**Collection Date**	: 21/Feb/2023 10:03AM
Gender	: M	**Report Date**	: 21/Feb/2023 03:59PM

Test Name	Result	Unit	Bio Ref. Interval	Method
BILIRUBIN (TOTAL) , *GEL SERUM*				
BILIRUBIN (TOTAL)	**2.40**	mg/dL	0.3-1.2 mg/dL	Vanadate oxidation
TO CORRELATE CLINICALLY				
UREA,BLOOD , *GEL SERUM*	**17.1**	mg/dL	19-49 mg/dL	Urease with GLDH
TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .				
TOTAL PROTEIN	8.20	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.8	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	1.41		1.0 - 2.5	Calculated
BILIRUBIN (DIRECT) , *GEL SERUM*				
BILIRUBIN (DIRECT)	**0.60**	mg/dL	<0.2 mg/dL	Vanadate oxidation
TO CORRELATE CLINICALLY				

Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist

Lab No. : SR7321848 **Name : SAYAN SAHA** **Age/G : 33 Y 2 M 11 D / M** **Date : 21-02-2023**

ALKALINE PHOSPHATASE , *GEL SERUM*				
ALKALINE PHOSPHATASE	81.00	U/L	46-116 U/L	IFCC standardization
SODIUM, BLOOD , *GEL SERUM*				
SODIUM,BLOOD	141.00	mEq/L	132 - 146 mEq/L	ISE INDIRECT
***CHLORIDE, BLOOD ,** .				
CHLORIDE,BLOOD	103.00	mEq/L	99-109 mEq/L	ISE INDIRECT
CREATININE, BLOOD	0.78	mg/dL	0.7-1.3 mg/dL	Jaffe, alkaline picrate, kinetic
URIC ACID, BLOOD , *GEL SERUM*				
URIC ACID,BLOOD	5.90	mg/dL	3.5-7.2 mg/dL	Uricase/Peroxidase
POTASSIUM, BLOOD , *GEL SERUM*				
POTASSIUM,BLOOD	4.20	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
SGPT/ALT , *GEL SERUM*				
SGPT/ALT	38.00	U/L	7-40 U/L	Modified IFCC
SGOT/AST , *GEL SERUM*				
SGOT/AST	20.00	U/L	13-40 U/L	Modified IFCC
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)	8.2	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	2.04	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:

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.

PHOSPHORUS-INORGANIC, BLOOD , *GEL SERUM*

PHOSPHORUS-INORGANIC,BLOOD	3.5	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV

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

ABO	A	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 Mansi Gulati
Consultant Pathologist
MBBS, MD, DNB (Pathology)

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Lab No. : SR7321848 **Name : SAYAN SAHA** **Age/G : 33 Y 2 M 11 D / M** **Date : 21-02-2023**

ESR (ERYTHROCYTE SEDIMENTATION RATE) , *EDTA WHOLE BLOOD*

1stHour	**28**	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	5.0		4.6 - 8.0	Dipstick (triple indicator method)
SPECIFIC GRAVITY	1.015		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)	1-3	/hpf	0-5	Microscopy
EPITHELIAL CELLS	6-8	/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:

1. All urine samples are checked for adequacy and suitability before examination.
2. Analysis by urine analyzer of dipstick is based on reflectance photometry principle. Abnormal results of chemical examinations are confirmed by manual methods.
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	15.0	g/dL	13 - 17	PHOTOMETRIC
WBC	**11.0**	*10^3/µL	4 - 10	DC detection method
RBC	5.27	*10^6/µL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	285	*10^3/µL	150 - 450*10^3/µL	DC detection method/Microscopy
DIFFERENTIAL COUNT				
NEUTROPHILS	61	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	32	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	05	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	02	%	1-6%	Flowcytometry/Microscopy

Lab No. : SR7321848	Name : SAYAN SAHA		Age/G : 33 Y 2 M 11 D / M	Date : 21-02-2023
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy
CBC SUBGROUP 1				
HEMATOCRIT / PCV	42.9	%	40 - 50 %	Calculated
MCV	**81.3**	fl	83 - 101 fl	Calculated
MCH	28.4	pg	27 - 32 pg	Calculated
MCHC	**35.0**	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	**14.3**	%	11.6-14%	Calculated
RETICULOCYTE COUNT-AUTOMATED,BLOOD	1.1	%	0.5-2.5%	Cell Counter/Microscopy

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CALCIUM, BLOOD

CALCIUM,BLOOD	9.80	mg/dL	8.7-10.4 mg/dL	Arsenazo III

URIC ACID, URINE, SPOT URINE

URIC ACID, SPOT URINE	**28.00**	mg/dL	37-92 mg/dL	URICASE

ESTIMATED TWICE

PDF Attached

GLYCATED HAEMOGLOBIN (HBA1C) , *EDTA WHOLE BLOOD*

GLYCATED HEMOGLOBIN (HBA1C)	7.5	%	***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***	
HbA1c (IFCC)	58.0	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 B_{12}/ 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.*

LIPID PROFILE , *GEL SERUM*

CHOLESTEROL-TOTAL	142.00	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	Enzymatic
TRIGLYCERIDES	**168.00**	mg/dL	Normal:: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	GPO-Trinder

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Lab No. : SR7321848	Name : SAYAN SAHA		Age/G : 33 Y 2 M 11 D / M	Date : 21-02-2023
HDL CHOLESTEROL	**30.00**	mg/dl	< 40 - Low 40-59- Optimum 60 - High	Elimination/catalase
LDL CHOLESTEROL DIRECT	91.0	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	21	mg/dl	< 40 mg/dl	Calculated
CHOL HDL Ratio	4.7		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.*

GLUCOSE, FASTING , *BLOOD, NAF PLASMA*

GLUCOSE,FASTING	**163**	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.

GLUCOSE, PP , *BLOOD, NAF PLASMA*

GLUCOSE,PP	**308**	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.

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Suraksha DIAGNOSTICS

Lab No.	: PHL/21-02-2023/SR7321848	**Lab Add.**	:
Patient Name	: **SAYAN SAHA**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 33 Y 2 M 11 D	**Collection Date:**	
Gender	: M	**Report Date**	: 21/Feb/2023 05:25PM

X-RAY REPORT OF CHEST (PA)

Lung fields expanded

Patchy opacity seen in right parahilar region consistent with pneumonitis.

Rest of the lung field clear.

Central medatinum with normal cardaic size.

Dome of diaphragm and adjoining angle normal.

Sugest follow up.

Kindly note

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

DR.GAUTAM GHOSH
MD
CONSULTANT RADIOLOGIST

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Lab No.	: PHL/21-02-2023/SR7321848	**Lab Add.**	:
Patient Name	: **SAYAN SAHA**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 33 Y 2 M 11 D	**Collection Date:**	
Gender	: M	**Report Date**	: 21/Feb/2023 12:37PM

DEPARTMENT OF ULTRASONOGRAPHY
REPORT ON EXAMINATION OF WHOLE ABDOMEN

LIVER

Liver is enlarged in size with evidence of grade I fatty change,having normal shape, regular smooth outline and of homogeneous echotexture.No focal parenchymal lesion is evident.Intrahepatic biliary radicles are not dilated.Branches of portal vein are normal.

Liver = 171mm. in mid clavicular line.

Portal vein = 9.3mm.

GALL BLADDER

Gallbladder is optimally distended. Gall bladder wall thickness 2.2mm.
A polyp 4.5x 5.1mm. size seen at gall bladder wall. No calculus seen in gall bladder.

CBD is not dilated = 3.9mm.

PANCREAS

Echogenecity appears within limits, without any focal lesion. Shape, size & position appears normal. No Calcular disease noted. Pancreatic duct is not dilated. No peri-pancreatic collection of fluid noted.

SPLEEN

Spleen is normal in size. Homogenous and smooth echotexture without any focal lesion. Splenic vein at hilum appears normal. No definite collaterals could be detected.

Spleen = 11.8cm.

KIDNEYS

Both kidneys are normal in shape, size (Rt. kidney 10.9cm. & Lt. kidney 10.0cm.) position. Cortical echogenecity appears normal maintaining corticomedullary differentiation. Margin is regular and cortical thickness is uniform.
No calcular disease noted. No hydronephrotic changes detected.

URETERS

Ureters are not dilated.

URINARY BLADDER

Urinary bladder is distended, wall thickness appeared normal. No intraluminal pathology (calculi / mass) could be detected.
Post void residue = 5c.c.

PROSTATE

Prostate is normal in size.Echotexture appears within normal limits. No focal alteration of its echogenecity could bedetectable.
It measures :2.5cm.x 2.9cm.x 2.7cm.
Approximate weight could be around = 11 gms.

Ascites : **No ascitic fluid seen**

Lymph node : **No enlarged paraaortic lymph node seen.**

Pleural effusion : Pleural effusion absent at both CP angle.

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Suraksha DIAGNOSTICS

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Patient Name	: **SAYAN SAHA**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 33 Y 2 M 11 D	**Collection Date:**	
Gender	: M	**Report Date**	: 21/Feb/2023 12:37PM

IMPRESSION

1. **Hepatomegaly with evidence of grade I fatty infiltration in liver parenchyma.**
2. **A polyp seen at gall bladder wall.**

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.

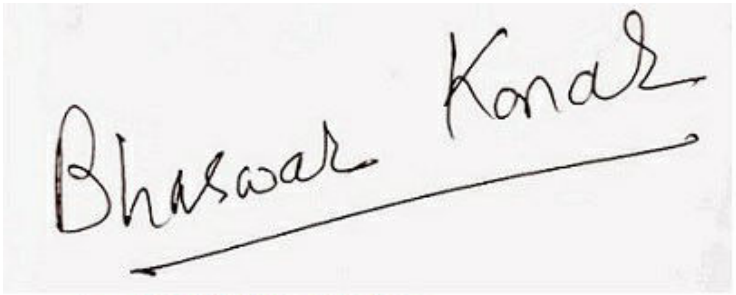
DR T.K BISWAS
Sonologist

Suraksha DIAGNOSTICS

Lab No.	: PHL/21-02-2023/SR7321848	**Lab Add.**	:
Patient Name	: **SAYAN SAHA**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 33 Y 2 M 11 D	**Collection Date:**	
Gender	: M	**Report Date**	: 21/Feb/2023 03:47PM

E.C.G. REPORT

DATA		
HEART RATE	98	Bpm
PR INTERVAL	144	Ms
QRS DURATION	106	Ms
QT INTERVAL	320	Ms
QTC INTERVAL	412	Ms
AXIS		
P WAVE	65	Degree
QRS WAVE	20	Degree
T WAVE	15	Degree
IMPRESSION	:	**Normal sinus rhythm, within normal limits.**



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SURAKSHA DIAGNOSTIC,RAJARHAT,KOLKATA **PATIENT REPORT**
BIO-RAD VARIANT-II TURBO CDM5.4. SN-16122 **V2TURBO_A1c_2.0**

Patient Data

Sample ID:	C02135003230
Patient ID:	SR7321848
Name:	
Physician:	
Sex:	
DOB:	

Comments:

Analysis Data

Analysis Performed:	21/FEB/2023 13:49:11
Injection Number:	2361U
Run Number:	44
Rack ID:	0004
Tube Number:	2
Report Generated:	21/FEB/2023 14:37:19
Operator ID:	ASIT

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	0.9	0.158	15751
A1b	---	2.0	0.219	33714
LA1c	---	2.0	0.394	34215
A1c	7.5*	---	0.498	106047
P3	---	3.6	0.780	61611
P4	---	1.4	0.864	23195
Ao	---	84.0	0.993	1438455

*Values outside of expected ranges Total Area: 1,712,989

HbA1c (NGSP) = 7.5* % HbA1c (IFCC) = 58* mmol/mol