



Lab No. : KNK/22-04-2023/SR7554053
 Patient Name : RUPA BAIN
 Age : 28 Y 2 M 25 D
 Gender : F

Lab Add. : Newtown, Kolkata-700156
 Ref Dr. : Dr.MEDICAL OFFICER
 Collection Date: 23/Apr/2023 08:02AM
 Report Date : 24/Apr/2023 10:51AM



Test Name	Result	Unit	Bio Ref. Interval	Method
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[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 glycemc targets

- Ø Patients should use self-monitoring of blood glucose (SMBG) and HbA1c levels to assess glycemc 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 glycemc control.
- Ø If a patient changes treatment plans or does not meet his or her glycemc 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 NEEPA CHOWDHURY
 MBBS MD (Biochemistry)
 Consultant Biochemist

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*POTASSIUM, BLOOD , GEL SERUM					
POTASSIUM,BLOOD	4.80	mEq/L	3.5 - 5.5 mEq/L	ISE DIRECT	
*SODIUM, BLOOD , GEL SERUM					
SODIUM,BLOOD	138	mEq/L	136 - 145 mEq/L	ISE DIRECT	
UREA,BLOOD , GEL SERUM					
	26.0	mg/dL	19 - 49 mg/dL	Urease with GLDH	
*CBC WITH PLATELET (THROMBOCYTE) COUNT , EDTA WHOLE BLOOD					
HEMOGLOBIN	10.8	g/dL	12 - 15	PHOTOMETRIC	
WBC	4.2	*10 ³ /μL	4 - 10	DC detection method	
RBC	3.68	*10 ⁶ /μL	3.8 - 4.8	DC detection method	
PLATELET (THROMBOCYTE) COUNT	150	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy	
<u>DIFFERENTIAL COUNT</u>					
NEUTROPHILS	45	%	40 - 80 %	Flowcytometry/Microscopy	
LYMPHOCYTES	49	%	20 - 40 %	Flowcytometry/Microscopy	
MONOCYTES	04	%	2 - 10 %	Flowcytometry/Microscopy	
EOSINOPHILS	02	%	1 - 6 %	Flowcytometry/Microscopy	
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy	
<u>CBC SUBGROUP</u>					
HEMATOCRIT / PCV	32.8	%	36 - 46 %	Calculated	
MCV	89.0	fl	83 - 101 fl	Calculated	
MCH	29.2	pg	27 - 32 pg	Calculated	
MCHC	32.8	gm/dl	31.5-34.5 gm/dl	Calculated	
RDW - RED CELL DISTRIBUTION WIDTH	14.8	%	11.6-14%	Calculated	
PDW-PLATELET DISTRIBUTION WIDTH	25.4	fL	8.3 - 25 fL	Calculated	
MPV-MEAN PLATELET VOLUME	11.7		7.5 - 11.5 fl	Calculated	
*CALCIUM, BLOOD					
CALCIUM,BLOOD	9.20	mg/dL	8.7-10.4 mg/dL	Modified OCPC	
*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.

*LIPID PROFILE , GEL SERUM					
CHOLESTEROL-TOTAL	165	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	CHOD – PAP	
TRIGLYCERIDES	86	mg/dL	Normal: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	ENZYMATIC (END POINT)	

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HDL CHOLESTEROL	36	mg/dl	< 40 - Low 40-59- Optimum 60 - High ENZYMATIC (PEG)
LDL CHOLESTEROL DIRECT	115	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 HOMOGENOUS ENZYMATICAL
VLDL	14	mg/dl	< 40 mg/dl Calculated
CHOL HDL Ratio	4.6		LOW RISK 3.3-4.4 AVERAGE RISK 4.47-7.1 MODERATE RISK 7.1-11.0 HIGH RISK >11.0 Calculated
CREATININE, BLOOD	0.75	mg/dL	0.5-1.1 mg/dL Jaffe, alkaline picrate, kinetic
GLUCOSE, FASTING , BLOOD, NAF PLASMA			
GLUCOSE,FASTING	100	mg/dL	Impaired Fasting-100-125 mg/dL. Hexokinase Method Diabetes- >= 126 mg/dL. Fasting is defined as no caloric intake for at least 8 hours.
*ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD			
1stHour	86	mm/hr	0.00 - 20.00 mm/hr Westergren
*URINE ROUTINE ALL, ALL , URINE			
<u>PHYSICAL EXAMINATION</u>			
COLOUR	PALE YELLOW		
APPEARANCE	SLIGHTLY HAZY		
<u>CHEMICAL EXAMINATION</u>			
pH	6		4.8 - 7.4 DIPSTICK
SPECIFIC GRAVITY	1.020		1.016-1.022 DIPSTICK
PROTEIN	NOT DETECTED		NOT DETECTED DIPSTICK(Protein Error Principle)/MANUAL
GLUCOSE	NOT DETECTED		NOT DETECTED DIPSTICK (Glucose Oxidase - peroxidase)/ MANUAL
KETONES (ACETOACETIC ACID, ACETONE)	NOT DETECTED		NOT DETECTED Dipstick (Legals test)/Manual
BLOOD	NEGATIVE		NOT DETECTED DIPSTICK(Pseudo Peroxidase Method)
BILIRUBIN	ABSENT		NEGATIVE DIPSTICK(Azo-Diazo Reaction)/MANUAL
UROBILINOGEN	NOT DETECTED		NORMAL DIPSTICK(Diazonium Ion Reaction)/MANUAL
NITRITE	NEGATIVE		NEGATIVE DIPSTICK(GRIESS TEST)
LEUCOCYTE ESTERASE	NEGATIVE		NEGATIVE DIPSTICK
<u>MICROSCOPIC EXAMINATION</u>			
LEUKOCYTES (PUS CELLS)	1 - 2	/hpf	0-5 Microscopy
EPITHELIAL CELLS	0 - 2	/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
OTHERS	NIL		

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.

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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.

***GLUCOSE, PP , BLOOD, NAF PLASMA**

GLUCOSE,PP	88	mg/dL	Impaired Glucose Tolerance-140 mg/dL to 199 mg/dL. Diabetes>= 200 mg/dL.	Hexokinase Method
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***THYROID PANEL (T3, T4, TSH) , GEL SERUM**

T3-TOTAL (TRI IODOTHYRONINE)	1.29	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	9.7	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	3.11	µIU/mL	0.35-5.5 µIU/mL	CLIA

BIOLOGICAL REFERENCE INTERVAL : [ONLY FOR PREGNANT MOTHERS]

Trimester specific TSH LEVELS during pregnancy:

FIRST TRIMESTER : 0.10 2.50 µ IU/mL
 SECOND TRIMESTER : 0.20 3.00 µ IU/mL
 THIRD TRIMESTER : 0.30 3.00 µ IU/mL

References :

1. Indian Thyroid Society guidelines for management of thyroid dysfunction during pregnancy. Clinical Practice Guidelines, New Delhi: Elsevier; 2012.
2. Stagnaro-Green A, Abalovich M, Alexander E, Azizi F, Mestman J, Negro R, et al. Guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease During Pregnancy and Postpartum. Thyroid 2011; 21: 1081-25.
3. Dave A, Maru L, Tripathi M. Importance of Universal screening for thyroid disorders in first trimester of pregnancy. Indian J Endocr Metab [serial online] 2014 [cited 2014 Sep 25]; 18: 735-8. Available from: <http://www.ijem.in/text.asp?2014/18/5/735/139221>.

***CHLORIDE, BLOOD , .**

CHLORIDE,BLOOD	103	mEq/L	98 - 107 mEq/L	ISE DIRECT
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***TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .**

TOTAL PROTEIN	7.70	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	3.9	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	3.80	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.03		1.0 - 2.5	Calculated

***URIC ACID, BLOOD , GEL SERUM**

URIC ACID,BLOOD	3.90	mg/dL	2.6-6 mg/dL	URICASE
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DR. SHABNAM PARVIN
MD (Pathology)
Consultant Pathologist



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PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM

PHOSPHORUS-INORGANIC,BLOOD 4.7 mg/dL 2.4-5.1 mg/dL Phosphomolybdate/UV

□

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

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Report Date : 22/Apr/2023 02:59PM



DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA		
HEART RATE	58	Bpm
PR INTERVAL	144	Ms
QRS DURATION	80	Ms
QT INTERVAL	378	Ms
QTC INTERVAL	374	Ms
AXIS		
P WAVE	39	Degree
QRS WAVE	50	Degree
T WAVE	47	Degree
IMPRESSION	: Sinus bradycardia, early repolarization changes in infero-lateral leads.	

ACRay

Dr. A C RAY

Department of Non-invasive
Cardiology

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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.

□

DR. VIMLESH JI VIMAL
MBBS (Cal)
MD, DMRD(IPGME & R)
Consultant Radiologist
Reg No 61436

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ULTRASONOGRAPHY OF WHOLE ABDOMEN

LIVER: Normal in shape, size (12.47 cm) and parenchyma echotexture. 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; wall thickness is normal. **Multiple calculi are noted in Gall Bladder lumen, largest one measure 1.99 cm.** No pericholecystic collection or mass formation is noted.

PORTA HEPATIS: The portal vein is normal in caliber with clear lumen. The common bile duct is normal in caliber. Visualized lumen is clear.

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 enlarged in size (12.66 cm) and normal 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. **One tiny calculus (0.34 cm) is seen at middle calyx of left kidney.** No hydronephrosis or mass noted. The perinephric region shows no abnormal fluid collection.

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

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

UTERUS: It is normal in shape, size and echopattern. Endometrial and myometrial echotexture are within normal. No focal SOL is seen. Cervix is normal.

OVARIES: Both the ovaries are bulky in size and containing multiple follicles of varying sizes & arranged peripherally with central hyperechoic, hypertrophied stroma --- Suggestive of polycystic ovarian changes.

Right Ovary volume: 15.80 cc.

Left Ovary volume: 23.34 cc.

ADNEXA: No adnexal SOL is noted.

POD: Fluid collection is seen.

IMPRESSION:

- Cholelithiasis.
- Splenomegaly.
- Left renal tiny calculus.
- Bulky & polycystic morphology ovaries.
- Collection in Pouch of Douglas.

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Kindly note

- Ø Ultrasound is not the modality of choice to rule out subtle bowel lesion.
- Ø Please Intimate us for any typing mistakes and send the report for correction within 7 days.
- Ø 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. VIMLESH JI VIMAL
MBBS (Cal)
MD, DMRD(IPGME & R)
Consultant Radiologist
Reg No 61436

Patient Data

Sample ID: D02135101213
 Patient ID: SR7554053
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 23/APR/2023 16:21:43
 Injection Number: 2240U
 Run Number: 50
 Rack ID: 0002
 Tube Number: 8
 Report Generated: 23/APR/2023 16:27:33
 Operator ID: ANAMIKA

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.0	0.158	25576
A1b	---	0.7	0.219	18652
F	---	0.7	0.270	17447
LA1c	---	1.7	0.395	43238
A1c	5.1	---	0.500	104015
P3	---	3.1	0.786	79962
P4	---	1.1	0.863	27868
Ao	---	87.5	0.979	2221840

Total Area: 2,538,597

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

