MC-2743

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Suraksha DIAGNOSTICS

Lab No.	: MRD/05-05-2023/SR7603339	**Lab Add.**	: Newtown, Kolkata-700156
Patient Name	: **NIKITA KUMARI**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 38 Y 0 M 0 D	**Collection Date**	: 05/May/2023 10:23AM
Gender	: F	**Report Date**	: 05/May/2023 01:26PM

Test Name	Result	Unit	Bio Ref. Interval	Method
SODIUM, BLOOD , *GEL SERUM*				
SODIUM,BLOOD	142	mEq/L	132 - 146 mEq/L	ISE INDIRECT
POTASSIUM, BLOOD , *GEL SERUM*				
POTASSIUM,BLOOD	4.40	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
UREA,BLOOD , *GEL SERUM*	23.5	mg/dL	19-49 mg/dL	Urease with GLDH
CREATININE, BLOOD	0.65	mg/dL	0.5-1.1 mg/dL	Jaffe, alkaline picrate, kinetic
GLUCOSE, FASTING , *BLOOD, NAF PLASMA*				
GLUCOSE,FASTING	83	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.

PHOSPHORUS-INORGANIC, BLOOD , *GEL SERUM*				
PHOSPHORUS-INORGANIC,BLOOD	3.7	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV

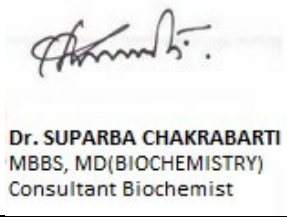
Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist

Lab No. : SR7603339 **Name : NIKITA KUMARI** **Age/G : 38 Y 0 M 0 D / F** **Date : 05-05-2023**

LIPID PROFILE , *GEL SERUM*

CHOLESTEROL-TOTAL	154	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	Enzymatic
TRIGLYCERIDES	92	mg/dL	Normal:: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	GPO-Trinder
HDL CHOLESTEROL	50	mg/dl	< 40 - Low 40-59- Optimum 60 - High	Elimination/catalase
LDL CHOLESTEROL DIRECT	91	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	13	mg/dl	< 40 mg/dl	Calculated
CHOL HDL Ratio	3.1		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.*



Dr. SUPARBA CHAKRABARTI
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Consultant Biochemist

Lab No. : SR7603339 **Name : NIKITA KUMARI** **Age/G : 38 Y 0 M 0 D / F** **Date : 05-05-2023**

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

1stHour	19	mm/hr	0.00 - 20.00 mm/hr	Westergren

CBC WITH PLATELET (THROMBOCYTE) COUNT , *EDTA WHOLE BLOOD*

HEMOGLOBIN	**8.3**	g/dL	12 - 15	PHOTOMETRIC
WBC	4.8	*10^3/µL	4 - 10	DC detection method
RBC	4.01	*10^6/µL	3.8 - 4.8	DC detection method
PLATELET (THROMBOCYTE) COUNT	180	*10^3/µL	150 - 450*10^3/µL	DC detection method/Microscopy
DIFFERENTIAL COUNT				
NEUTROPHILS	55	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	40	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	05	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	**00**	%	1-6%	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy
CBC SUBGROUP				
HEMATOCRIT / PCV	**29.2**	%	36 - 46 %	Calculated
MCV	**72.8**	fl	83 - 101 fl	Calculated
MCH	**20.8**	pg	27 - 32 pg	Calculated
MCHC	**28.6**	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	**21.6**	%	11.6-14%	Calculated
PDW-PLATELET DISTRIBUTION WIDTH	16.2	fL	8.3 - 25 fL	Calculated
MPV-MEAN PLATELET VOLUME	8		7.5 - 11.5 fl	Calculated
RBC	ANISOPOIKILOCYTOSIS, PREDOMINANTLY MICROCYTIC HYPOCHROMIC, FEW ELLIPTOCYTES AND POLYCHROMATIC CELLS SEEN			
WBC.	NORMAL IN NUMBER & MORPHOLOGY			
PLATELET	ADEQUATE. NO HEMOPARASITES SEEN.			

URINE ROUTINE ALL, ALL , *URINE*

PHYSICAL EXAMINATION			
COLOUR	PALE YELLOW		
APPEARANCE	HAZY		
CHEMICAL EXAMINATION			
pH	6.0	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	POSITIVE(+++)	NEGATIVE	Dipstick (ester hydrolysis reaction)
MICROSCOPIC EXAMINATION			

Lab No. : SR7603339	Name : NIKITA KUMARI		Age/G : 38 Y 0 M 0 D / F	Date : 05-05-2023
LEUKOCYTES (PUS CELLS)	14-16	/hpf	0-5	Microscopy
EPITHELIAL CELLS	20-22	/hpf	0-5	Microscopy
RED BLOOD CELLS	OCCASIONAL	/hpf	0-2	Microscopy
CAST	NOT DETECTED		NOT DETECTED	Microscopy
CRYSTALS	NOT DETECTED		NOT DETECTED	Microscopy
BACTERIA	PRESENT(+++)		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.

Dr Mansi Gulati
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MBBS, MD, DNB (Pathology)

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Lab No. : SR7603339	Name : NIKITA KUMARI	Age/G : 38 Y 0 M 0 D / F	Date : 05-05-2023

TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .

TOTAL PROTEIN	7.60	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.3	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	**3.30**	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.30		1.0 - 2.5	Calculated

PDF Attached

GLYCATED HAEMOGLOBIN (HBA1C) , *EDTA WHOLE BLOOD*

GLYCATED HEMOGLOBIN (HBA1C)	5.0	%	***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***	
HbA1c (IFCC)	31.0	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.

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

T3-TOTAL (TRI IODOTHYRONINE)	1.05	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	5.6	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	3.28	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.*

GLUCOSE, PP , *BLOOD, NAF PLASMA*

GLUCOSE,PP	79*	mg/dL	Impaired Glucose Tolerance-140 to 199. Diabetes>= 200.	Gluc Oxidase Trinder

* Blood glucose level is maintained by a very complex integrated mechanism involving critical interplay of release of hormones and action of enzymes on key metabolic pathways resulting in a smooth transition normally from a high level of glucose influx following meal / glucose intake to a basal level after 2 – 3 hrs. or so. Excluding alimentary hypoglycemia, renal glycosuria, hereditary fructose intolerance and Galactosemia, the possible causes of post prandial reactive hypoglycemia (PRH) include high insulin sensitivity, exaggerated response of insulin and glucagon like peptide 1, defects in counter-regulation, very lean and /or anxious individuals, after massive weight reduction etc.

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.

URIC ACID, BLOOD , *GEL SERUM*

URIC ACID,BLOOD	4.20	mg/dL	2.6-6.0 mg/dL	Uricase/Peroxidase

***CHLORIDE, BLOOD ,** .

CHLORIDE,BLOOD	**110**	mEq/L	99-109 mEq/L	ISE INDIRECT

CALCIUM, BLOOD

CALCIUM,BLOOD	8.90	mg/dL	8.7-10.4 mg/dL	Arsenazo III

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

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Suraksha DIAGNOSTICS

Lab No.	: MRD/05-05-2023/SR7603339	**Lab Add.**	:
Patient Name	: **NIKITA KUMARI**	**Ref Dr.**	: Dr.MEDICAL OFFICER
Age	: 38 Y 0 M 0 D	**Collection Date**	:
Gender	: F	**Report Date**	: 05/May/2023 04:48PM

DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA

HEART RATE : 73 bpm

PR INTERVAL : 126 ms

QRS DURATION : 78 ms

QT INTERVAL : 412 ms

QTC INTERVAL : 453 ms

AXIS

P WAVE : 58 degree

QRS WAVE : 58 degree

T WAVE : 20 degree

IMPRESSION : **Normal sinus rhythm.**

Normal ECG.

Dr Prasun Halder
MBBS/PGDCC

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Patient Name	: **NIKITA KUMARI**	**Ref Dr.**	: Dr.MEDICAL OFFICER
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Gender	: F	**Report Date**	: 05/May/2023 03:48PM

DEPARTMENT OF RADIOLOGY
X-RAY REPORT OF CHEST (PA)

FINDINGS :

Infective changes noted in both lower zones.

Both the hila are normal in size, density and position.

Mediastinum is central. 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.

Dr. P.C.Jain
MD Radiodiagnosis

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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:	D02132153075
Patient ID:	SR7603339
Name:	
Physician:	
Sex:	
DOB:	

Comments:

Analysis Data

Analysis Performed:	05/MAY/2023 14:10:58
Injection Number:	4282U
Run Number:	94
Rack ID:	0003
Tube Number:	3
Report Generated:	05/MAY/2023 14:23:56
Operator ID:	ASIT

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
Unknown	---	0.2	0.109	2594
A1a	---	0.9	0.156	14574
A1b	---	1.2	0.217	19809
F	---	0.2	0.319	3189
LA1c	---	1.8	0.393	31129
A1c	5.0	---	0.496	67584
P3	---	3.5	0.782	59553
P4	---	1.1	0.860	19296
Ao	---	87.1	0.986	1467847

Total Area: 1,685,574

HbA1c (NGSP) = 5.0 % HbA1c (IFCC) = 31 mmol/mol