Dr. Vinay Chopra
MD (Pathology & Microbiology)
Chairman & Consultant Pathologist

Dr. Yugam Chopra
MD (Pathology)
CEO & Consultant Pathologist

TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

NAME	**: Mr. GURMAIL**		
AGE/ GENDER	: 25 YRS/MALE	**PATIENT ID**	: 1571984
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012408050082**
REFERRED BY	:	**REGISTRATION DATE**	: 05/Aug/2024 10:07 PM
BARCODE NO.	: 01514548	**COLLECTION DATE**	: 05/Aug/2024 10:25PM
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HAEMATOLOGY

COMPLETE BLOOD COUNT (CBC)

Test Name	Value	Unit	Biological Reference interval
RED BLOOD CELLS (RBCS) COUNT AND INDICES			
HAEMOGLOBIN (HB) *by CALORIMETRIC*	13.9	gm/dL	12.0 - 17.0
RED BLOOD CELL (RBC) COUNT ***by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE***	**5.27^{H}**	**Millions/cmm**	**3.50 - 5.00**
PACKED CELL VOLUME (PCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	44.6	%	40.0 - 54.0
MEAN CORPUSCULAR VOLUME (MCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	84.6	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) ***by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER***	**26.4^{L}**	**pg**	**27.0 - 34.0**
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) ***by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER***	**31.2^{L}**	**g/dL**	**32.0 - 36.0**
RED CELL DISTRIBUTION WIDTH (RDW-CV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	12.9	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	41.6	fL	35.0 - 56.0
MENTZERS INDEX *by CALCULATED*	16.05	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX *by CALCULATED*	20.73	RATIO	BETA THALASSEMIA TRAIT: < = 65.0 IRON DEFICIENCY ANEMIA: > 65.0
WHITE BLOOD CELLS (WBCS)			
TOTAL LEUCOCYTE COUNT (TLC) *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	9640	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY*	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY*	NIL	%	< 10 %
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			

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Test Name	Value	Unit	Biological Reference interval
NEUTROPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	51	%	50 - 70
LYMPHOCYTES ***by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY***	**43^{H}**	**%**	**20 - 40**
EOSINOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	2	%	1 - 6
MONOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	4	%	2 - 12
BASOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	%	0 - 1
ABSOLUTE LEUKOCYTES (WBC) COUNT			
ABSOLUTE NEUTROPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	4916	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	4145	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	193	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	386	/cmm	80 - 880
ABSOLUTE BASOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	/cmm	0 - 110
PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.			
PLATELET COUNT (PLT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	184000	/cmm	150000 - 450000
PLATELETCRIT (PCT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	0.26	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) ***by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE***	**14^{H}**	**fL**	**6.50 - 12.0**
PLATELET LARGE CELL COUNT (P-LCC) ***by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE***	**97000^{H}**	**/cmm**	**30000 - 90000**
PLATELET LARGE CELL RATIO (P-LCR) ***by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE***	**52.5^{H}**	**%**	**11.0 - 45.0**
PLATELET DISTRIBUTION WIDTH (PDW) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	16.6	%	15.0 - 17.0

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

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CLINICAL CHEMISTRY/BIOCHEMISTRY

LIVER FUNCTION TEST (COMPLETE)

Test Name	Value	Unit	Biological Reference interval
BILIRUBIN TOTAL: SERUM *by DIAZOTIZATION, SPECTROPHOTOMETRY*	0.95	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM *by DIAZO MODIFIED, SPECTROPHOTOMETRY*	0.25	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM *by CALCULATED, SPECTROPHOTOMETRY*	0.7	mg/dL	0.10 - 1.00
SGOT/AST: SERUM *by IFCC, WITHOUT PYRIDOXAL PHOSPHATE*	20.1	U/L	7.00 - 45.00
SGPT/ALT: SERUM *by IFCC, WITHOUT PYRIDOXAL PHOSPHATE*	36.5	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	0.55	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM *by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL*	126.06	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM *by SZASZ, SPECTROPHTOMETRY*	32.1	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM *by BIURET, SPECTROPHOTOMETRY*	7.25	gm/dL	6.20 - 8.00
ALBUMIN: SERUM *by BROMOCRESOL GREEN*	4.02	gm/dL	3.50 - 5.50
GLOBULIN: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	3.23	gm/dL	2.30 - 3.50
A : G RATIO: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	1.24	RATIO	1.00 - 2.00

INTERPRETATION

NOTE:- **To be correlated in individuals having SGOT and SGPT values higher than Normal Referance Range.**

USE:- Differential diagnosis of diseases of hepatobiliary system and pancreas.

INCREASED:

DRUG HEPATOTOXICITY	> 2
ALCOHOLIC HEPATITIS	> 2 (Highly Suggestive)
CIRRHOSIS	1.4 - 2.0

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Test Name	Value	Unit	Biological Reference interval
INTRAHEPATIC CHOLESTATIS	> 1.5		
HEPATOCELLULAR CARCINOMA & CHRONIC HEPATITIS	> 1.3 (Slightly Increased)		

DECREASED:

1. Acute Hepatitis due to virus, drugs, toxins (with AST increased 3 to 10 times upper limit of normal)
2. Extra Hepatic cholestatis: 0.8 (normal or slightly decreased).

PROGNOSTIC SIGNIFICANCE:

NORMAL	< 0.65
GOOD PROGNOSTIC SIGN	0.3 - 0.6
POOR PROGNOSTIC SIGN	1.2 - 1.6

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Test Name	Value	Unit	Biological Reference interval

MOLECULAR PATHOLOGY

HEPATITIS C VIRAL (HCV) RNA VIRAL LOAD (QUANTITATIVE): RT-PCR

HEPATITIS C VIRUS (HCV) RNA (QUANTITATIVE): EDTA PLASMA *by RT-PCR (REAL TIME-POLYMERASE CHAIN REACTION)*	UNDETECTABLE OR < 30.0	IU/mL	UNDETECTABLE OR < 30.0
DETECTION LIMIT *by RT-PCR (REAL TIME-POLYMERASE CHAIN REACTION)*	30	IU/mL	< 30.0

INTERPRETATION:

RESULT IN IU/mL	REMARKS
< 30.0	HCV RNA Below the detection limit of the assay or not present
>= 30.0 OR < 40.0	< 40 IU/mL quantitation not possible since the quantitative result is below the linear range of the assay
>= 40 AND 4 X 10^9	HCV RNA Detected within the linear range of the assay
>= 4 X 10^9	HCV RNA Detected above the linear range of the assay

1. Hepatitis C is an infectious disease caused by Hepatitis C virus (HCV), which can lead to inflammation and significant damage in the liver.
2. Although it predominantly infects the cells of the liver, it can also affect other parts of the body. During the acute phase following the initial infection of HCV, it is generally asymptomatic and clinically undetectable.
3. About 85 % of the acute infections become chronic and the remaining naturally get cured. In rare cases, acute hepatitis is accompanied by jaundice, malaise, weakness and anorexia.
4. It is estimated that 74 to 86 % of individuals with the acute infection develop persistent viremia, which subsequently leads to chronic infection and possibly to cirrhosis or hepatocellular carcinoma. The conventional diagnostic methods include serological testing and liver biopsy. Since HCV cannot be cultured in the clinical laboratory, a sensitive molecular testing is needed to confirm the presence of the virus such as quantitative real-time PCR.

NOTE:

Sensitivity: 30 IU/ml

Sensitivity & Dynamic range: 4 X 10^9

A "DETECTED" result will be reported with quantification in IU/ml. It indicates the degree of active HCV viral replication in the patient.

A "LESS THAN DETECTABLE LIMIT" result indicates that either absence of HCV RNA in patient~s specimen or HCV RNA level is below the lower limit of quantification of this assay.

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Test Name	Value	Unit	Biological Reference interval

A "Inconclusive Result" indicates that inhibitory substances may be present in the specimen and collection and testing of a new specimen is recommended.

CONVERSION FACTOR FOR COPIES: Result (copies/ml) = Result (IU/ml) x 2.7

METHODOLOGY DETAILS:

1. HCV RNA is extracted from plasma by US FDA approved Automatic Extraction machine based on magnetic bead technology.
2. Purified RNA is then amplified and quantified using CE- IVD approved Real time PCR.
3. Extraction and Amplification controls (IC) are incorporated in each run to ensure more accurate and precise detection of RNA

*** End Of Report ***

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