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M.D. (Pathology)

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**Sample Collection Date** 18-12-2020 11:33  
**Lab Ref. No.** 200156392  
**Name** MS. VEENA MODI

**DDL Center** Dr.Dangs Lab  
**Age / Sex** 68 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
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### HAEMATOLOGY

BLOOD GROUP, Whole Blood	AB
RH FACTOR	POSITIVE

**Method:** DIACLON ABO/D + Reverse Group ID Gel Card (Bio-Rad).

Both forward and reverse blood grouping is being performed according to the recommended standard laid down by International Council for Standardization in Hematology (ICSH) and NABL.

### PROTHROMBIN TIME STUDIES, CITRATED BLOOD

PLASMA TEST [ Coagulation Assay ]	11.10 Seconds	9.61-12.89
CONTROL	12.10 Seconds	
INR	0.93	

### Common causes of prolonged PT

Vitamin K deficiency, Vitamin K antagonists (e.g. warfarin, phenindione, rodenticides), Liver disease, Disseminated Intravascular Coagulation, Factor VII deficiency. The test is being performed on fully automated coagulation analyser (ACL TOP 300).

### ERYTHROCYTE SEDIMENTATION RATE

E.S.R. WESTERGREN [Automated]	11 mm 1st Hr	0 - 30
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**\*\* End of HAEMATOLOGY Report \*\***

DR. ARCHNA R. PAHWA  
M.D. (PATHOLOGY)  
(Authorised Signatory)

Authentication : 18-12-2020 12:54  
Printed on : 18-12-2020 14:44

DR. SONAL JAIN  
D.M. (Hematology, A.I.I.M.S.)  
(Head Hematology)



**Sample Collection Date** 18-12-2020 11:33  
**Lab Ref. No.** 200156392  
**Name** MS. VEENA MODI

**DDL Center** Dr.Dangs Lab  
**Age / Sex** 68 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
<b>HAEMATOLOGY</b>		

**D-DIMER (QUANTITATIVE)**

D-Dimer, Citrate plasma [ Immunoturbidmetric Assay ]

**1.39 mg FEU/L**

< 0.5

D-Dimer is a sensitive marker for the activation of coagulation. When D-Dimer values below the cut off are obtained, deep venous thrombosis (DVT) of the lower limb and pulmonary embolism (PE) can be excluded with high sensitivity.

In disseminated intravascular coagulation (DIC)/consumptive coagulopathy, fibrin degradation products are a sensitive marker. Monitoring the fibrin-specific degradation products can be used to

- confirm or refute a tentative diagnosis
- estimate the potential risk for patients with existing DIC
- monitor an initiated therapy

Apart from DVT, PE, and DIC, D-Dimer may reflect other causes associated with fibrin formation such as trauma, pregnancy complications, malignant disease or vascular abnormalities. Elevated D-Dimer levels therefore have to be interpreted in the context of possible underlying diseases and clinical symptoms.

**\*\* End of HAEMATOLOGY Report \*\***

DR. MANAVI DANG  
M.D. (PATHOLOGY)  
(Associate Director)

Authentication : 18-12-2020 13:24  
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DR. SONAL JAIN  
D.M. (Hematology, A.I.I.M.S.)  
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**Sample Collection Date** 18-12-2020 11:33      **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200156392      **Age / Sex** 68 Years / FEMALE  
**Name** MS. VEENA MODI

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
<b>HAEMATOLOGY</b>		
<b>COMPLETE BLOOD COUNT</b>		
HAEMOGLOBIN	13.1 g/dL	11 - 15
TOTAL LEUCOCYTE COUNT	6210 Cells/cu.mm	4000 - 11000
RED BLOOD CELL COUNT	4.21 mill/cu.mm	4.2 - 5.5
PACKED CELL VOLUME	40.80 %	36 - 46
MCV (MEAN CORPUSCULAR VOLUME)	96.91 fL	79 - 98
MCH (MEAN CORPUSCULAR HB)	31.12 pg	26 - 32
MCHC (MEAN CORPUSCULAR HB CONC)	32.11 g/dL	30 - 36
RED CELL DISTRIBUTION WIDTH	13.20 %	11.5 - 15.5
PLATELET COUNT	333000 /cu.mm	150000 - 450000
<b>DIFFERENTIAL LEUCOCYTE COUNT</b>		
SEGMENTED NEUTROPHILS	54 %	40 - 80
LYMPHOCYTES	38 %	20 - 40
MONOCYTES	6 %	2 - 10
EOSINOPHILS	1 %	1 - 6
BASOPHILS	1 %	0 - 2
<b>ABSOLUTE LEUCOCYTE COUNT</b>		
NEUTROPHIL	3353 cells/mm <sup>3</sup>	1800-7700
LYMPHOCYTE	2360 cells/mm <sup>3</sup>	1000-4800
MONOCYTE	373 cells/mm <sup>3</sup>	0-800
EOSINOPHIL	62 cells/mm <sup>3</sup>	0-450
BASOPHIL	62 cells/mm <sup>3</sup>	0-200

**BLOOD PICTURE**

RBCs are predominantly normocytic normochromic. WBC series is essentially unremarkable. Platelets appear adequate on smear.

Sample Type: K2 EDTA Whole blood

Methodology: Automated cell counter, Sysmex XN-1000 based on Optical / Fluorescence / Flow Cytometry / SLS .

**\*\* End of HAEMATOLOGY Report \*\***



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**Dr. Manavi Dang**  
M.D. (Pathology)

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M.D. (Pathology)

**Sample Collection Date** 18-12-2020 11:33  
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**Name** MS. VEENA MODI

**DDL Center** Dr.Dangs Lab  
**Age / Sex** 68 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
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DR. SHIVANGI CHAUHAN  
M.D. (PATHOLOGY)  
(Authorised Signatory)

DR. SONAL JAIN  
D.M. (Hematology, A.I.I.M.S.)  
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Authentication : 18-12-2020 13:07  
Printed on : 18-12-2020 14:44



<b>Sample Collection Date</b>	18-12-2020 11:33	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200156392		
<b>Name</b>	MS. VEENA MODI	<b>Age / Sex</b>	68 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
<b>BIOCHEMISTRY &amp; IMMUNOTURBIDIMETRY</b>		
<b>INTERLEUKIN-6 (IL-6) LEVELS, EDTA Plasma [ECLIA]</b>	1.50 pg/mL	< 7.0

#### SUMMARY AND EXPLANATION OF THE TEST:

Interleukin-6 (IL-6) is a cytokine (protein) produced by various cells in the body. It helps regulate immune responses, which makes it potentially useful as a marker of immune system activation. IL-6 can be elevated with inflammation, sepsis, infections, autoimmune disorders, cardiovascular diseases and some cancers. The test measures the amount of IL-6 in the blood. Elevated levels have been associated in some cases with an increased risk of disease development or worsening prognosis.

NOTE: Interleukin-6 (IL-6) is a nonspecific marker associated with an inflammatory response and is not **diagnostic** for any specific disease or disease process. Elevated concentrations of IL-6 must be interpreted within the clinical context of the patient.

Normal concentrations of IL-6 do not exclude the possibility of an ongoing inflammatory process.

Lower detection limit: 1.5 pg/mL

**Procalcitonin [ECLIA]** 0.02 ng/mL

Clinical cut-off

<0.5 ng/mL- Low risk of severe sepsis and/or septic shock.  
> 2.0 ng/mL- High risk of severe sepsis and/or septic shock.

Clinician should use the PCT results in conjunction with other laboratory findings and clinical signs of the patient and interpret the concrete values in reference with the clinical presentation of the patient.

The below given ranges can be used for point of reference purpose.

1. PCT <0.5 ng/mL- Healthy individuals- Normal value to be below 0.5 ng/mL.

2. PCT <0.5 ng/mL- Systemic infection (sepsis) is not likely. Local bacterial infection is possible- Low risk for progression to severe systemic infection (severe sepsis). PCT level below 0.5 ng/mL do not exclude an infection, because localized infections (without systemic signs) may be associated with such low levels. Also if the PCT measurement is done very early following bacterial challenge (usually <6 hours), these values may still be low. In these cases, PCT should be re-assessed 6-24 hours later.

3. PCT 0.5 to < 2 ng/mL- Systemic infection (sepsis) is possible, but various conditions are known to induce PCT as well- Moderate risk for progression to severe systemic infection (severe sepsis). The patient should be closely monitored both clinically and by re-assessing PCT within 6-24 hours.

4. PCT >2 to <10 ng/mL-Systemic infection (sepsis) is likely, unless other causes are known-High risk for progression to severe systemic infection (severe sepsis).

5. PCT >10 ng/mL-Important systemic inflammatory response, almost exclusively due to severe bacterial sepsis or septic shock-High likelihood of severe sepsis or septic shock.



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<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
GLUCOSE Fasting ,Plasm a [ Hexokinase ]	<b>106.00 mg/dL</b>	60 - 100
AMYLASE,Serum [ Enzymatic Assay ]	78.00 U/L	28 - 100
C.P.K. ,Serum [ U.V.Assay ]	165.00 U/L	26 - 192
MAGNESIUM,Serum [ Chlorophosphonazo III ]	2.00 mg/dL	1.6-2.4

**LIPID PROFILE**

④ CHOLESTEROL,Serum [ Enzymatic Assay ]	<b>260.00 mg/dL</b>	130 - 220
TRIGLYCERIDES,Serum [ Enzymatic Colorimetric ]	65.00 mg/dL	50 - 150
H.D.L. CHOLESTEROL,Serum [ Homogeneous Enzymatic ]	74.00 mg/dL	30 - 75
L.D.L. CHOLESTEROL,Serum [ Homogeneous Enzymatic Assay ]	<b>154.00 mg/dL</b>	30 - 100
VLDL CHOLESTEROL,Serum [ calculated ]	13.00 mg/dL	10 - 30
NON H.D.L. CHOLESTEROL,Serum [ Calculated ]	186.00 mg/ dL	
CHOLESTEROL-HDL RATIO,Serum [ Calculated ]	3.51 : 1	
CHOLESTEROL-TRIGLYCERIDE RATIO,Serum [ Calculated ]	4.00 : 1	
Lipoprotein [ a ] level,Serum [ Immunochromatographic Test ]	7.21 mg/dL	0 - 30
<b>APOLIPOPROTEIN A-1 (APO A-1)[ Immuno Turbidimetric Assay ]</b>	<b>270.00 mg/dL</b>	108 - 225
<b>APOLIPOPROTEIN B (APO-B)[ Immuno Turbidimetric Assay ]</b>	116.00 mg/dL	60 - 117
APO-B/APO-A1	0.430	0.35-0.98

Analyzer: Cobas c-501

Methodology: Immunoturbiditometric

1. Apolipoproteins are the protein constituents of the Lipoproteins.
2. Apolipoprotein A1 (ApoA1) is the primary protein component of high-density lipoprotein (HDL).
3. Apolipoprotein B (Apo B) is the primary protein component of low-density lipoprotein (LDL) and is a more powerful independent predictor of Coronary Heart Disease (CAD) than LDL.
4. A high level of Apo A 1 and a low level of Apo B correlate best with a low risk of Lipid disorder and CAD.
5. Decreased ApoA1 and elevated Apo B are associated with increased risk of Lipid disorder and CAD.
6. Elevated Apo B: Apo A 1 ratio can reflect a lipid metabolism disorder and the risk of developing CAD particularly well, thus providing an excellent addition to the classical HDL/LDL cholesterol determination.
7. Apolipoprotein studies help in monitoring coronary bypass surgery patients with regard to risk and severity of re -stenosis. They are also useful in assessing risk of re-infarction in patients of Myocardial infarction.

Biological Reference Value:

Apo B to Apo A1 Ratio-As per NCEP Guidelines

0.35 - 0.98 (Desirable)

&gt;0.98 (Increased CAD Risk)

④ HOMOCYSTEINE LEVEL,Serum[ CMIA ]	<b>18.11 μmol/L</b>	5.0-15.0
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**KIDNEY FUNCTION TEST**



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<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
UREA,Serum [ Kinetic Method ]	13.50 mg/dL	10 - 50
BUN (BLOOD UREA NITROGEN),Serum	6.30 mg/dL	4.7 - 23.4
CREATININE,Serum [ Kinetic Jaffe's method ]	0.82 mg/dL	0.5-1.3
URIC ACID,Serum [ Enzymatic Assay ]	4.50 mg/dL	2 - 7
IONIZED CALCIUM,Serum [ BAPTA Method ]	1.27 mmol/L	1.1-1.28
TOTAL CALCIUM,Serum [ BAPTA Method ]	10.16 mg/dL	8.8-10.2
PHOSPHORUS,Serum [ Molybdate UV ]	4.10 mg/dL	2.5-4.5
SODIUM,Serum [ Ion selective electrode ]	143.00 mmol/L	132 - 150
POTASSIUM,Serum [ Ion selective electrode ]	5.00 mmol/L	3.5 - 5
CHLORIDE,Serum [ Ion selective electrode ]	102.00 mmol/L	98 - 107

**LIVER FUNCTION TEST**

BILIRUBIN (Total),Serum [ Diazo Method ]	0.60 mg/dL	0.2 - 1.00
BILIRUBIN (DIRECT),Serum [ Diazo Method ]	0.28 mg/dL	0-0.30
BILIRUBIN (INDIRECT),Serum [ Calculated ]	0.32 mg/dL	0.1 - 0.8
S.G.O.T. Serum [ Kinetic Method ]	26.00 U/L	5 - 32
S.G.P.T. Serum [ Kinetic Method ]	16.00 U/L	5 - 33
ALKALINE PHOSPHATASE,Serum [ Kinetic (PNP) ]	47.00 U/L	35 - 104
G.G.T.P. Serum [ Enzymatic Assay ]	15.00 U/L	6 - 42
TOTAL PROTEINS,Serum [ Buret method ]	8.20 g/dL	6 - 8.5
ALBUMIN,Serum [ Calorimetric BCG ]	4.80 g/dL	3.5 - 5
GLOBULIN,Serum [ Calculated ]	3.40 g/dL	
ALBUMIN/GLOBULIN RATIO,Serum [ Calculated ]	1.41	1.1 - 2.2

**SPOT MICROALBUMIN CREATININE RATIO**

Spot Urine Microalbumin [ Immuno Turbidimetric Assay ]	0.49 mg/dL	
Spot Urine Creatinine [ Standardized against ID / MS ]	132.4 mg/dL	28-217
Spot urine Microalbumin in Creatinine Ratio	3.70 mg /g creatinine	< 30

## Reference:

American Diabetes Association. Standards of medical care in diabetes - 2015. Diabetes Care. 2015;38(suppl):S1.

**\*\* End of BIOCHEMISTRY & IMMUNOTURBIDIMETRY Report \*\***

® MARKED RESULT IS RECHECKED AND VERIFIED





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<b>Name</b>	MS. VEENA MODI		

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
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### IMMUNO ASSAYS

PROLACTIN LEVEL, Serum [ECLIA]	11.15 ng/mL	4.8 - 23.3
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Advice: Mid morning pooled sample for prolactin estimation.

CA - 125 LEVEL, Serum [ECLIA]	8.20 U/mL	0 - 35
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1. Cancer Antigen 125 (CA-125) is a protein that is present on the surface of most ovarian cancer cells . This makes the test useful as a tumor marker in specific circumstances.
2. Significantly elevated concentrations of CA-125 may be present in the blood of a woman who has ovarian cancer. Thus the test may be used to monitor the effectiveness of treatment and/or for recurrence of the cancer. However, not all women with ovarian cancer will have elevated CA-125, so the test may not be useful in all cases.
3. CA-125 is NOT recommended as a screening test for asymptomatic women because it is non-specific.
4. Small quantities of CA-125 are produced by normal tissues throughout the body and by some other cancers. Levels in the blood may be moderately elevated with a variety of non-cancerous conditions, including menstruation, pregnancy and pelvic inflammatory disease .
5. The assay values should be used in conjunction with other clinical and diagnostic findings.

CA - 19.9 LEVEL, Serum [ECLIA]	32.13 U/mL	0 - 39
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1. Cancer antigen 19.9 is a glycoprotein which is frequently elevated in patients with gastrointestinal malignancies such as pancreatic, colorectal, gastric and hepatic carcinomas.
2. As per current international guidelines, the use of CA19-9 may be recommended only for the monitoring of pancreatic cancer. Persistently elevated CA 19.9 levels are usually indicative of progressive malignant disease and poor therapeutic response.
3. This test is NOT recommended as a screening test for gastrointestinal malignancies in the general population.
4. Increased levels may be seen in benign conditions like hepatitis, pancreatitis, cirrhosis and cystic fibrosis.
5. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy. False-positive results have often been reported in asymptomatic subjects.
6. This assay, regardless of level, should not be interpreted as absolute evidence for the presence or absence of malignant disease and result should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.

\*Patients should always be monitored for CA19-9 with the same testing method.

Test Methodology: ELECTRO CHEMILUMISCENCE IMMUNOASSAY  
Equipment Name: COBAS (ROCHE)



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**Test (Methodology)** **Result** **Biological Reference Interval**  
**CARCINO EMBRYONIC ANTIGEN LEVEL, Serum [ECLIA]** 2.60 ng/mL 0 - 5

1. Carcino Embryonic Antigen is a tumor associated antigen used for monitoring patients with Colorectal, Gastrointestinal & Lung carcinoma and for diagnosis of occult metastatic disease and / or residual disease.

2. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.

3. Benign conditions associated with an increase in CEA levels include: Smoking, COPD, Pancreatitis, Inflammatory bowel diseases such as Crohn's disease or ulcerative colitis, Hepatitis, Cirrhosis of the liver, Peptic ulcer disease, cholecystitis, Hypothyroidism etc.

4. This assay, regardless of level, should not be interpreted as absolute evidence for the presence or absence of malignant disease and therefore, result should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.

Test Methodology: ECLIA

Equipment Name: COBAS

<b>CORTISOL LEVEL (Morning), Serum [ECLIA]</b>	12.17 ug/dL	6.02 - 18.4
<b>PARATHYROID HORMONE LEVEL, Serum [ECLIA]</b>	37.71 pg/mL	15 - 65
<b>NT-proBNP II, Serum [ECLIA]</b>	343.30 pg/mL	5 - 353

#### COMMENTS

The N-terminal Pro-Brain Natriuretic (pro-BNP) is an assay used as an aid in the diagnosis of individuals suspected of having congestive heart failure. The test is further indicated for the risk stratification of patients with acute coronary syndrome and coronary heart disease. The test may also be used as an aid in the assessment of increased risk of cardiovascular events and mortality in patients at risk for heart failure who have stable coronary artery disease. When used with the recommended cut off values, the assay yields negative predictive values ranging from 97% to 100% depending on age and gender.

For diagnostic purposes, the results should always be assessed in conjunction with the patients medical history, clinical findings and other information (e.g. imaging, laboratory findings, accompanying disorders, treatment effects). This test has no single number that identifies an abnormal result. The levels decrease in most patients who have been taking therapies for heart failure, such as ACE inhibitors, beta-blockers and diuretics. Levels tend to increase with age and in persons with kidney disease. For chronic heart failure patients the NT-proBNP levels should be correlated with the NYHA Functional Class.

#### THYROID PROFILE

<b>FREE TRIIODOTHYRONINE [FT3], Serum [ECLIA]</b>	3.01 pg/mL	1.8 - 4.6
<b>FREE THYROXINE [FT4], Serum [ECLIA]</b>	1.45 ng/dL	0.93 - 1.7
<b>T.S.H. [ULTRASENSITIVE], Serum [ECLIA]</b>	2.58 $\mu$ IU/mL	0.27-4.2

Triiodothyronine (T3) and Thyroxine (T4) are thyroid hormones which circulate in the blood as an equilibrium mixture of free and protein bound hormones. The Free T3 fraction (0.2-0.4% of the total T3) and the Free T4 fraction (Less than 0.3 % of the total T4) represent the physiologically available and biologically active thyroid hormones. The Free T4 and TSH levels fluctuate significantly during birth and can remain much higher than adult values during the first month after birth. Proper clinical interpretation and correlation of the reports in neonates is mandatory.

The test is performed on Roche Cobas 6000 Chemiluminescence platform.





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**Test (Methodology)** **Result** **Biological Reference Interval**  
**CIRCULATING TSH LEVELS ARE KNOWN TO SHOW A CIRCADIAN RHYTHM & DIURNAL VARIATION. THE DIAGNOSIS BASED ON ONE TSH VALUE WHICH FLUCTUATES IS NOT RELIABLE. CLINICAL CORRELATION IS MANDATORY.**

IgE LEVEL, Serum [ECLIA] 132.20 IU/mL 5 - 100

#### Summary and Explanation of the Test: -

IgE concentration in human serum is extremely low, increasing from a geometric mean of 0.22 IU/mL (one IU = 2.4 ng) at birth to approximately 20.0 IU/mL (adult value) at 14 years of age. IgE binds to receptors on mast cells and basophils leading to the release of histamine and other mediators, producing the symptoms of "allergies". Elevated IgE levels in young children are predictive of subsequent developments of allergic diseases. Levels are elevated also in parasitic diseases, bronchiolitis, bronchopulmonary aspergillosis and immunodeficiency diseases (Wiskott-Aldrich Syndrome, DiGeorge Syndrome and hyper IgE Syndrome). IgE concentrations vary as a result of diet, genetic background, geographical location and other influences. Healthy nonallergic adults have an expected IgE concentration of up to 120 IU/mL. Children without allergic symptoms are expected to have approximately 10% to 20% of the adult value. Low IgE values do not indicate the absence of allergies. Some patients may have low total IgE level but high concentration of specific IgE antibody. Sensitivity of the COBAS 6000 Total IgE assay is 0.10IU/ML.

An elevated IgE level is most commonly seen in the case of an immediate allergy.  
For testing options to various allergies (food / respiratory) kindly contact front office for details.

VITAMIN D-3 LEVEL, Serum [ECLIA] 53.80 ng/mL 25-100

#### Interpretation:

- Less than 12 ng/ml: Definitely deficient
- 12-25 ng/ml: Insufficient
- 25 - 100 ng/ml: Adequate
- More than 100 ng/ml: Toxic

THE TEST IS BEING PERFORMED ON FDA APPROVED FULLY AUTOMATED REFERENCE IVD PLATFORM .

The two most important forms of Vitamin D are Vitamin D3 and Vitamin D2. In contrast to Vitamin D3, Vitamin D2 has to be taken up with food. In the human body Vitamin D3 and D2 are bound to Vitamin D-binding protein in plasma and transported to liver where both are hydroxylated in position 25 forming 25-OH Vitamin D. 25-OH Vitamin D is the metabolite that should be measured in blood to determine the overall Vitamin D status because it is the major storage form of Vitamin D in the human body. More than 95% of 25-OH Vitamin D, measurable in serum, is 25-OH Vitamin D3 whereas 25-OH Vitamin D2 reaches measurable levels only in patients taking Vitamin D2 supplements. Vitamin D is a common cause of secondary hyperparathyroidism. Elevations of PTH levels, especially in elderly Vitamin D deficient adults can result in osteomalacia, increased bone turnover, reduced bone mass and risk of bone fractures.

Reference - Position paper of the International Osteoporosis Foundation.

⑧ VITAMIN B-12 LEVEL, Serum [ECLIA] 1733.00 pg/mL 197 - 771

COMMENT:

Please correlate with history of intake of B12 supplements.

- Vitamin B12 (cobalamin) is a water-soluble vitamin and is normally found in animal products including meats, eggs and milk





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& milk products. It cannot be produced in the body and must be supplied by the diet.

- It is necessary for hematopoiesis and normal neuronal function. As it is obtained mainly from animal proteins, in humans, it requires intrinsic factor (IF) for absorption.
- Vitamin B12 deficiency may be due to lack of IF secretion by the gastric mucosa (pernicious anaemia) or intestinal malabsorption. It is also seen in vegetarians with inadequate B12 intake.
- Its deficiency frequently causes macrocytic anaemia, glossitis, peripheral neuropathy, weakness, ataxia, poor coordination and affective behavioural changes.
- An increase in the levels of Vitamin B 12 is mostly due to excessive ingestion of multivitamin capsules with B12. Conditions such as liver diseases and myeloproliferative disorders occasionally exhibit increased levels.
- Serum homocysteine levels are also elevated in B12 deficiency.

<b>FOLIC ACID LEVEL, Serum [ CMIA ]</b>	20.00 ng/mL	3.1 - 20.5
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- Folic acid, also known as Vitamin B9, is a water-soluble vitamin and is present in a variety of vegetarian and non-vegetarian foods.
- It is necessary for cell division and synthesis of DNA, especially in a developing fetus and is crucial during early pregnancy to reduce the risk of birth defects of the brain and spine.
- Approximately 20% is absorbed daily and is derived from dietary sources, the remainder is synthesized by intestinal microorganisms.
- Significant folate deficiency is characteristically associated with macrocytosis and megaloblastic anemia.
- Folate deficiency is most commonly due to insufficient dietary intake.
- Low levels are seen in: Megaloblastic /macrocytic/hemolytic anemias, Infantile hyperthyroidism, Alcoholism, Malnutrition, Scurvy, Liver disease, B12 deficiency, adult Celiac disease, Crohn's disease, Carcinomas, Myelofibrosis, pregnancy, extensive intestinal resection and severe exfoliative dermatitis.
- Serum homocysteine levels are also elevated in folate deficiency.

<b>ZINC, Serum [ Colorimetric ]</b>	170.0 µg/dL	65-256
<b>IRON, Serum [ Direct Colorimetric Assay ]</b>	99.00 µg/dL	60 - 170
<b>T.I.B.C. [ Calculated ]</b>	363.00 µg/dL	250 - 450
<b>U.I.B.C. Serum [ Direct Determination with Ferrozine ]</b>	264.00 µg/dL	135-392
<b>TRANSFERRIN SATURATION [ calculated ]</b>	27.27 %	20-50
<b>FERRITIN LEVEL, Serum [ ECLIA ]</b>	22.69 ng/mL	



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Adult Males (18-30 yrs)	18.7-323.0	
Adult Males(31 - 60 yrs)	16.4-293.9	
Adult Females(premenopausal)	6.9-282.5	
Adult Females(postmenopausal)	14.0-233.1	
CHILDREN -		
New Born	25.0 - 200.0	
1 Month	200.0 - 600.0	
2- 5 Months	50.0 - 200.0	
6 Months-15 Years	10.0 - 140.0	

**GLYCOSYLATED HAEMOGLOBIN [HbA1C]**

GLYCOSYLATED HAEMOGLOBIN [HbA1C],Whole Blood[HPLC] 5.50 % 4.4-6.5

\*Mean Plasma Glucose 118 mg/dL

ANALYZER: Tosoh Automated Glycohemoglobin Analyzer HLC-723G8 (G8)

METHODOLOGY: HPLC

- This assay is useful for diagnosing Diabetes and evaluating long term control of blood glucose concentrations in diabetic patients. It reflects the mean glucose concentration over the previous period of 8 - 12 weeks and is a better indicator of long-term glycemic control as compared with blood and urine glucose levels due to lesser day to day variation.
- Specifically, the A1C test measures what percentage of hemoglobin is coated with sugar (glycated). Higher the A1C level, the poorer is blood sugar control and higher is the risk of diabetes complications.
- Disorders associated with a decreased erythrocyte life-span, as well as individuals with recent and significant blood loss and chronic renal failure, exhibit low glycated Hb values.
- The test is performed by Gold standard technique of HPLC.
- Effectiveness of A1C may be limited in conditions that affect RBC turnover, such as hemolytic anemia, glucose-6-phosphate dehydrogenase deficiency, recent blood transfusions, drugs that stimulate erythropoiesis, end-stage kidney disease, and pregnancy.
- Hemoglobin variants may interfere with A1c results. Fructosamine level estimation is recommended in such cases.

<b>As per American Diabetes Association (ADA)</b>	
<b>Reference Group</b>	<b>HbA1c in %</b>
Nondiabetic adults > =18 years	<5.7
At risk (Prediabetes)	5.7 -6.4
Diagnosing Diabetes	>6.5

**Comment: The final report has been generated after reviewing the HPLC Chromatogram.****\*\* End of IMMUNO ASSAYS Report \*\***

® MARKED RESULT IS RECHECKED AND VERIFIED





**Sample Collection Date** 18-12-2020 11:33 **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200156392 **Age / Sex** 68 Years / FEMALE  
**Name** MS. VEENA MODI

Test (Methodology)		Result	Biological Reference Interval
<b>SEROLOGY &amp; IMMUNOLOGY</b>			
RHEUMATOID FACTOR , Serum	[ Immunoturbidimetric Assay ]	11.00 IU/mL	0 - 14
C-REACTIVE PROTEIN [High Sensitivity], Serum	[ Immunoturbidimetry ]	0.04 mg/dL	0 - 0.5

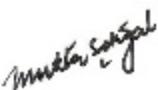
Biological reference value: < 0.5 mg/dL

**Note:** Persistent elevation of hs-CRP levels above 1.0 mg/dL may be associated with infection and inflammation.

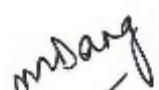
#### Interpretation:

1. The hs-CRP test accurately detects lower levels than the standard CRP test and is more precise when measuring baseline (i.e. normal) concentrations and enables a measure of chronic inflammation.
2. This test is a non-specific marker of inflammation and is used for evaluation of inflammatory disorders and associated diseases, infections and tissue injury. Its concentrations increase rapidly and dramatically in response to tissue injury or inflammation.
3. hs-CRP is useful for assessment of risk of developing myocardial infarction in individuals, presenting with acute coronary syndrome.
4. Relative cardiovascular risk is Low if hs-CRP value is <0.1 mg/dL, Moderate if 0.1 - 0.3 mg/dL and High if >0.3 mg/dL
5. hs-CRP is also useful for assessment of risk of developing cardiovascular disease or ischemic events in individuals who do not manifest disease at present.
6. Increase in CRP values are non-specific for many disease processes and should not be interpreted without a complete clinical evaluation.
7. It is important to monitor the CRP concentration during the acute phase of illness.

**\*\* End of SEROLOGY & IMMUNOLOGY Report \*\***

  
**DR. MUKTA SEHGAL**  
H.O.D. (BIOCHEMISTRY)  
(Authorised Signatory)

Authentication : 18-12-2020 13:03  
Printed on : 18-12-2020 14:44

  
**DR. MANAVI DANG**  
M.D. (PATHOLOGY)  
(Associate Director)



**Sample Collection Date** 18-12-2020 11:33 **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200156392 **Age / Sex** 68 Years / FEMALE  
**Name** MS. VEENA MODI

**Test (Methodology)** **Result** **Biological Reference Interval**

### MICROBIOLOGY

#### SARS-COV-2 QUANTITATIVE IGG ANTIBODIES, SERUM (CLIA)

INTERPRETATION: NEGATIVE

#### INTERPRETATION:

AU/mL	Results	INTERPRETATION
< 12.0	Negative	A negative result may indicate the absence of exposure to SARS-CoV-2 or a very low level of IgG antibodies to the pathogen (below detection limit of the assay). The test could score negative in infected patients during the incubation period and in the early stages of infection. A repeat testing should be done in such patients after minimum 2 weeks to conclude serological status.
≥ 12.0 to < 15.0	Equivocal	A second sample should be collected and tested one to two weeks later.
≥ 15.0	Positive	A positive result generally indicates exposure of the subject to the SARS-CoV-2.

1. The LIAISON® SARS-CoV-2 S1/S2 IgG uses indirect chemiluminescence immunoassay (CLIA) technology for the QUANTITATIVE DETERMINATION OF ANTI-S1 AND ANTI-S2 SPECIFIC IgG ANTIBODIES TO SARS-COV-2 IN HUMAN SERUM OR PLASMA SAMPLES. This is an USFDA-EUA and CE approved assay.

2. IgG ANTIBODY TEST RESULTS SHOULD ONLY BE INTERPRETED FOR SURVEILLANCE AND NOT AS A SOLE PARAMETER FOR DIAGNOSIS OF SARS-CoV-2 INFECTION.

3. The Spike (S) protein comprises of two functional subunits responsible for binding to the host cell receptor (S1 subunit) and fusion of the viral and cellular membranes (S2 subunit).

4. The assay is intended as an aid in the study of the immune status of infected patient by providing an indication of the presence of Anti S1 and Anti S2 neutralizing IgG antibodies against SARS-CoV-2, in COVID-19 Positive patients. Due to the recent discovery of the SARS-CoV-2 and the lack of data on patients, it is still not known whether such immune response will be long lasting/ or such antibodies will confer immunity against re-infection by the virus.

5. This assay is usually recommended after 2 weeks of exposure/infection or onset of symptoms.

6. Results from the LIAISON® SARS-CoV-2 S1/S2 IgG test should only be interpreted in conjunction with clinical findings, and the results from other laboratory tests and evaluations.

7. REAL TIME RT-PCR IS THE GOLD STANDARD TEST FOR DIAGNOSIS OF COVID-19 VIRUS (SARS-COV-2).

**METHODOLOGY: CHEMILUMINESCENCE IMMUNOASSAY (Indirect)**

**EQUIPMENT: LIAISON XL**

**\*\* End of MICROBIOLOGY Report \*\***



**Dr. Manju Dang**  
M.D. (Pathology)

**Prof (Dr.) Navin Dang**  
M.D. (Microbiology)

**Dr. Manavi Dang**  
M.D. (Pathology)

**Dr. Arjun Dang**  
M.D. (Pathology)

**Sample Collection Date** 18-12-2020 11:33  
**Lab Ref. No.** 200156392  
**Name** MS. VEENA MODI

**DDL Center** Dr.Dangs Lab  
**Age / Sex** 68 Years / FEMALE

**Test (Methodology)** **Result** **Biological Reference Interval**

DR. SWATI JAIN  
M.D (MICROBIOLOGY)  
(Authorised Signatory)

DR. DEVJANI DE  
M.D. (MICROBIOLOGY)  
(Authorised Signatory)

PROF (DR) NAVIN DANG  
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(Director)

Authentication : 18-12-2020 14:22  
Printed on : 18-12-2020 14:44



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**Dr. Arjun Dang**  
M.D. (Pathology)

**Sample Collection Date** 18-12-2020 11:33  
**Lab Ref. No.** 200156392  
**Name** MS. VEENA MODI

**DDL Center** Dr.Dangs Lab  
**Age / Sex** 68 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
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### **CLINICAL PATHOLOGY**

#### **URINE EXAMINATION ( ROUTINE )**

##### **MACROSCOPIC**

COLOUR	PALE YELLOW	
CLARITY	CLEAR	
SPECIFIC GRAVITY	1.025	1 - 1.04
REACTION(pH)	5.0	4.6 - 8
GLUCOSE/REDUCING SUBSTANCES	NIL	
PROTEIN (ALBUMIN)	NIL	
NITRITES	NEGATIVE	
<b>MICROSCOPIC EXAMINATION (CENTRIFUGED)</b>		
LEUCOCYTES	0-1 /HPF	
RBC	NIL /HPF	
CASTS	NIL	
CRYSTALS	NIL	
BACTERIA	NIL	

Biochemical parameters in urine sample are being performed on automated analyser. With advancing technology we have upgraded the method. Comparison of reports on follow up becomes more accurate as results are quantitative.

**\*\* End of CLINICAL PATHOLOGY Report \*\***

DR. MANIK AGARWAL  
M.D. (PATHOLOGY)  
(Authorised Signatory)

Authentication : 18-12-2020 14:02  
Printed on : 18-12-2020 14:44

PROF (DR) NAVIN DANG  
M.D.  
(Director)

Reports for the following tests may be collected as follows:

Report for FL ANA may be collected on Jan 11 from 5.00PM to 6:30PM





## CONDITIONS OF REPORTING

- ▶ In case of alarming or unexpected test results you are advised to contact the laboratory immediately for further discussions and action. Laboratory results are meant to be correlated with the patient's clinical history.
- ▶ The report will carry the name and age provided at the time of registration.
- ▶ Reporting of tests will be as per defined laboratory turn around time for each test. The same will be informed to the patient during first point of contact i.e. registration or phlebotomy as the case may be.
- ▶ Test results & reference ranges vary depending on the technology and methodology used.
- ▶ Rarely a second sample may be requested for an indeterminate result or any other pre-analytical / analytical reason.
- ▶ Reports can be received either as a hard copy or an email on your personal ID. Reports can also be delivered via courier. Payments can be made online on our website. Only reports with no pending payments are mailed, uploaded or dispatched.
- ▶ Reports can also be accessed via Dr. Dangs lab website or through the Dr. Dangs mobile application on IOS and android using the unique id and password provided to you during registration or received by you via SMS.
- ▶ Home collection sample facility is provided with prior appointment. Request for same to be given on 999-999-2020, booked online on [www.drdangslab.com](http://www.drdangslab.com) or through the Dr. Dangs mobile application on IOS and android.
- ▶ A digital invoice for tests performed is available on our website and can be accessed by using the unique I.D. and password provided.
- ▶ To maintain confidentiality, certain reports may not be mailed at the discretion of the management.
- ▶ In case of any queries pertaining to your test results or to provide feedback/suggestions please call us on 01145004200, 01126868929 or mail us at [info@drdangslab.com](mailto:info@drdangslab.com).
- ▶ 48 hour notice is required for the issuing of slides and blocks.
- ▶ Test results are not valid for medico legal purposes.
- ▶ The courts (forums) at Delhi shall have exclusive jurisdiction in all disputes/claims concerning the tests and/or results of the tests.

