



**Sample Collection Date** 31-12-2020 09:52      **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200163442      **Age / Sex** 58 Years / FEMALE  
**Name** MS. AMRITA BAKSHI

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

### HAEMATOLOGY

#### COMPLETE BLOOD COUNT

HAEMOGLOBIN	13.8 g/dL	11 - 15
TOTAL LEUCOCYTE COUNT	5260 Cells/cu.mm	4000 - 11000
RED BLOOD CELL COUNT	4.40 mill/cu.mm	4.2 - 5.5
PACKED CELL VOLUME	39.60 %	36 - 46
MCV (MEAN CORPUSCULAR VOLUME)	90.00 fL	79 - 98
MCH (MEAN CORPUSCULAR HB)	31.36 pg	26 - 32
MCHC (MEAN CORPUSCULAR HB CONC)	34.85 g/dL	30 - 36
RED CELL DISTRIBUTION WIDTH	12.30 %	11.5 - 15.5
PLATELET COUNT	363000 /cu.mm	150000 - 450000

#### DIFFERENTIAL LEUCOCYTE COUNT

SEGMENTED NEUTROPHILS	54 %	40 - 80
LYMPHOCYTES	32 %	20 - 40
MONOCYTES	9 %	2 - 10
EOSINOPHILS	4 %	1 - 6
BASOPHILS	1 %	0 - 2

#### ABSOLUTE LEUCOCYTE COUNT

NEUTROPHIL	2840 cells/mm <sup>3</sup>	1800-7700
LYMPHOCYTE	1683 cells/mm <sup>3</sup>	1000-4800
MONOCYTE	473 cells/mm <sup>3</sup>	0-800
EOSINOPHIL	210 cells/mm <sup>3</sup>	0-450
BASOPHIL	53 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 .

#### ERYTHROCYTE SEDIMENTATION RATE

E.S.R.WESTERGREN [Automated]	2 mm 1st Hr	0 - 30
------------------------------	-------------	--------

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





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442	<b>Age / Sex</b>	58 Years / FEMALE
<b>Name</b>	MS. AMRITA BAKSHI		

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

*Shivangi Chauhan*

DR. SHIVANGI CHAUHAN  
M.D. (PATHOLOGY)  
(Authorised Signatory)

Authentication : 31-12-2020 11:07  
Printed on : 31-12-2020 16:02

*Sonal Jain*

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





**Sample Collection Date** 31-12-2020 09:52      **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200163442      **Age / Sex** 58 Years / FEMALE  
**Name** MS. AMRITA BAKSHI

Test (Methodology)	Result	Biological Reference Interval
<b>BIOCHEMISTRY &amp; IMMUNOTURBIDIMETRY</b>		
EGFR	88.00 ml/minute	60-120
LIPASE, Serum [ Enzymatic Assay ]	20.00 U/L	13 - 60
L.D.H., Serum [ U.V.Assay ]	171.00 IU/L	135 - 214
ANTI- STREPTOLYSIN O, Serum [ Immuno Turbidimetric Assay ]	29.0 IU/mL	0 - 200

**BIOCHEMISTRY & IMMUNOTURBIDIMETRY**

EGFR	88.00 ml/minute	60-120
LIPASE, Serum [ Enzymatic Assay ]	20.00 U/L	13 - 60
L.D.H., Serum [ U.V.Assay ]	171.00 IU/L	135 - 214
ANTI- STREPTOLYSIN O, Serum [ Immuno Turbidimetric Assay ]	29.0 IU/mL	0 - 200

- ASO antibodies are produced about a week to a month after an initial streptococcal infection. The amount of ASO antibody (Titre) peaks at about 3 to 5 weeks after the illness and then tapers off but may remain detectable for several months after the streptococcal infection has resolved.
- Over 80% of patients with acute rheumatic fever and 95% of patients with acute glomerulonephritis due to streptococci have elevated ASO.
- A negative ASO or ASO that is present at very low titres means the person tested most likely has not had a recent strep infection. This is especially true if a sample taken 10 to 14 days later is also negative (low titre of antibody) and if an anti-DNase B test is also negative (low titre of antibody). A small percentage of people with a complication related to a strep infection will not have an elevated ASO. This is especially true with glomerulonephritis that may develop after a skin strep infection.
- An elevated titre of antibody (positive ASO) or an ASO titre that is rising means that it is likely that the person tested has had a recent streptococcal infection or persisting antigenic stimulus even if clinical signs have already disappeared. ASO titres that are initially high and then decline suggest that an infection has occurred and may be resolving.
- The ASO test does not predict whether complications will occur following a streptococcal infection, nor does it predict the type or severity of the disease. If symptoms of rheumatic fever or glomerulonephritis are present, an elevated ASO level may be used to help confirm the diagnosis.

GLUCOSE Fasting , Plasma [ Hexokinase ]	98.00 mg/dL	60 - 100
AMYLASE,Serum [ Enzymatic Assay ]	89.00 U/L	28 - 100
C.P.K. ,Serum [ U.V.Assay ]	92.00 U/L	26 - 192
MAGNESIUM,Serum [ Chlorophosphonazo III ]	1.80 mg/dL	1.6-2.6

#### LIPID PROFILE

CHOLESTEROL,Serum [ Enzymatic Assay ]	183.00 mg/dL	130 - 220
TRIGLYCERIDES,Serum [ Enzymatic Colorimetric ]	72.00 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 ]	93.00 mg/dL	30 - 100
VLDL CHOLESTEROL,Serum [ Calculated ]	14.40 mg/dL	10 - 30
NON H.D.L. CHOLESTEROL,Serum [ Calculated ]	109.00 mg/ dL	
CHOLESTEROL-HDL RATIO,Serum [ Calculated ]	2.47 : 1	





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
CHOLESTEROL-TRIGLYCERIDE RATIO,Serum [ Calculated ]	2.54 : 1	
Lipoprotein [a] level,Serum [ Immunochromatographic Test ]	2.96 mg/dL	0 - 30
APOLIPOPROTEIN A-1 (APO A-1)[ Immuno Turbidimetric Assay ]	201.00 mg/dL	108 - 225
APOLIPOPROTEIN B (APO-B)[ Immuno Turbidimetric Assay ]	77.00 mg/dL	60 - 141
APO-B/APO-A1	0.383	0.35-0.98

Analyzer: Cobas c-501

Methodology: Immunoturbiditometric

1. Apolipoproteins are the protein constituents of the Lipoproteins.
2. Apolipoprotein A1 (Apo A1) 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 Apo A1 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)

<b>HOMOCYSTEINE LEVEL,Serum [ CMIA ]</b>	8.88 µmol/L	5.0-15.0
--	-------------	----------

**KIDNEY FUNCTION TEST**

UREA,Serum [ Kinetic Method ]	26.60 mg/dL	10 - 50
BUN (BLOOD UREA NITROGEN),Serum	12.42 mg/dL	4.7 - 23.4
CREATININE,Serum [ Kinetic Jaffe's method ]	0.75 mg/dL	0.5-1.3
URIC ACID,Serum [ Enzymatic Assay ]	5.00 mg/dL	2 - 7
IONIZED CALCIUM,Serum [ BAPTA Method ]	1.23 mmol/L	1.1-1.25
TOTAL CALCIUM,Serum [ BAPTA Method ]	9.84 mg/dL	8.6-10
PHOSPHORUS,Serum [ Molybdate UV ]	4.90 mg/dL	2.5-4.5
SODIUM,Serum [ Ion selective electrode ]	136.00 mmol/L	132 - 150
POTASSIUM,Serum [ Ion selective electrode ]	4.00 mmol/L	3.5 - 5
CHLORIDE,Serum [ Ion selective electrode ]	99.00 mmol/L	98 - 107

**LIVER FUNCTION TEST**

BILIRUBIN (Total),Serum [ Diazo Method ]	0.50 mg/dL	0.2 - 1.00
--	------------	------------





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
BILIRUBIN (DIRECT), Serum [ Diazo Method ]	0.12 mg/dL	0-0.30
BILIRUBIN (INDIRECT), Serum [ Calculated ]	0.38 mg/dL	0.1 - 0.8
S.G.O.T. Serum [ Kinetic Method ]	17.00 U/L	5 - 32
S.G.P.T. Serum [ Kinetic Method ]	15.00 U/L	5 - 33
ALKALINE PHOSPHATASE, Serum [ Kinetic (PNP) ]	51.00 U/L	35 - 104
G.G.T.P. Serum [ Enzymatic Assay ]	23.00 U/L	6 - 42
TOTAL PROTEINS, Serum [ Buret method ]	6.30 g/dL	6 - 8.5
ALBUMIN, Serum [ Colorimetric BCG ]	4.20 g/dL	3.5 - 5
GLOBULIN, Serum [ Calculated ]	2.10 g/dL	
ALBUMIN/GLOBULIN RATIO, Serum [ Calculated ]	2.00	1.1 - 2.2

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



<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

**IMMUNO ASSAYS**

**LUTEINISING HORMONE LEVEL, Serum [ECLIA]** 60.78 mIU/mL

This assay is used for evaluating patients with suspected Hypogonadism, predicting ovulation, menopause, evaluating Infertility/menstrual irregularities, precocious puberty, PCOD and diagnosing pituitary disorders. It is essential for evaluating the reproductive cycle.

**Biological Reference Interval:**

Males: 1.7 - 8.6 mIU/mL

Females:

Follicular phase 2.4 - 12.6 mIU/mL

Ovulatory phase 14 - 96 mIU/mL

Luteal phase 1.0-11.4 mIU/mL

Post menopause 7.7-59 mIU/m

**FOLLICLE STIMULATING HORMONE LEVEL, Serum [ECLIA]** 107.50 mIU/mL

This assay is useful in management and treatment of infertility. It also evaluates gonadal function disorders, predicts ovulation and menstrual irregularities, and helps in diagnosing pituitary disorders.

**Biological Reference Interval:**

Males: 1.5 - 12.4 mIU/mL

Females:

Follicular phase 3.5 - 12.5 mIU/mL

Ovulatory phase 4.7 - 21.5 mIU/mL

Luteal phase 1.7 - 7.7 mIU/mL

Post menopause 25.8 - 134.8 mIU/mL

**PROLACTIN LEVEL, Serum [ECLIA]** 15.45 ng/mL 4.8 - 23.3

**Advice:** Mid-morning pooled sample for prolactin estimation.

This assay is a useful in the evaluation of amenorrhea, galactorrhea, abnormal nipple discharge, Infertility, Pituitary tumours and monitoring therapy in prolactin producing tumours. It also helps in differential diagnosis of male & female hypogonadism.

**NOTE: PROLACTIN IS SECRETED IN A PULSATILE MANNER AND IS ALSO INFLUENCED BY A VARIETY OF PHYSIOLOGIC STIMULI. IT IS STRONGLY RECOMMENDED TO DO TEST IN MID-MORNING POOLED SAMPLES (3 SAMPLES AT 20-30-MINUTE INTERVALS).**

**E STRADIOL LEVEL, Serum [ECLIA]** 11.14 pg/mL

This assay is useful for evaluating hypogonadism and oligomenorrhea in females. It assesses ovarian status including follicle development for assisted reproduction protocols. It evaluates feminization including gynecomastia in males. This assay forms a part of the diagnosis and work up of precocious and delayed puberty in females. It is also useful in monitoring low dose female hormone replacement therapy in post-menopausal women and for monitoring anti-estrogen therapy.





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

**Biological Reference Interval:**

Adult:

Males: 11.3 - 43.2 pg/ml

Females:

Follicular phase 30.9 - 90.4 pg/ml

Ovulation Phase 60.4 - 533 pg/ml

Luteal Phase 60.4 - 232 pg/ml

Postmenopause 5.0 - 138 pg/ml

Pregnancy:

1st Trimester: 154 - 3243 pg/ml

2nd Trimester: 1561 - 21,280 pg/ml

3rd Trimester: 8525 - 30,000 pg/ml

**ALPHA FETO PROTEIN (TUMOUR MARKER)**

<b>ALFA-FETO PROTEIN LEVEL, Serum [ CMIA ]</b>	6.98 ng/mL	0 - 7
--	------------	-------

1. AFP is an oncofetal protein, useful for determining prognosis and monitoring therapy for Hepatocellular carcinoma, non seminomatous testicular cancer, as well as occasionally in gastrointestinal tract malignancies with and without liver metastasis and only rarely in other malignancies.. Measurement of AFP levels in combination with HCG levels are useful in classifying and staging Germ cell tumors.

2. The assay values should be used in conjunction with other clinical and diagnostic findings.

3. This test is NOT recommended to screen cancers in the general population.

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

5. Use of AFP as a tumor marker is not recommended in pregnant females.

<b>CA - 125 LEVEL, Serum [ ECLIA ]</b>	5.90 U/mL	0 - 35
--	-----------	--------

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.

<b>CA 72-4 LEVEL, Serum [ ECLIA ]</b>	5.80 U/mL	5.6 - 8.2
---------------------------------------	-----------	-----------





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)

<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

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

CA 72-4 is a valuable tool for monitoring the occurrence of relapse and metastasis in patients with gastric cancer; with the help of a basal value subsequent to a pretherapeutic intervention followed by serial interval measurements. A 50 % rise is considered as clinically significant. A combined use of CA 72-4 in conjunction with CA 19-9 and CEA increases the accuracy of the results. Other malignancies of the gastrointestinal tract, breast, lung as well as non malignant conditions of the intestine like ulcerative colitis, Crohn's disease and gastric dysplasia are also associated with elevated CA 72-4 levels.

<b>CA - 15.3 LEVEL, Serum [ELFA]</b>	10.03 U/mL	0 - 31.3
--------------------------------------	------------	----------

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

CA 15.3 assay values are defined by using the 115 D8 and DF3 monoclonal antibodies. Monoclonal 115 D8 raised against human milk-fat globule membranes, and monoclonal antibody DF3 raised against membrane enriched fraction of metastatic human breast carcinoma, react with epitope 8 is expressed by a family of high molecular weight glycoproteins designated as polymorphic epithelial mucins (PEMs). CA 15.3 assay is used for monitoring of breast cancer in which levels are raised. It is also elevated in :

- A) Non mammary malignancies of - lung, colon, pancreas, primary liver, ovarian, cervical and endometrial cancer.
- B) Non malignant conditions - cirrhosis, hepatitis, autoimmune disorders, benign diseases of the ovary and breast. Patients with confirmed carcinoma frequently have CA 15.3 assay values in the same range as healthy individuals. The assay is not recommended as a cancer screening test owing to the above stated causes .

97.4 % of healthy female subjects had CA 15.3 values of or below 25 U/mL.

<b>CA - 19.9 LEVEL, Serum [ECLIA]</b>	5.60 U/mL	0 - 39
---------------------------------------	-----------	--------

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: ELECTROCHEMILUMISCENCE IMMUNOASSAY

Equipment Name: COBAS (ROCHE)

<b>CARCINO EMBRYONIC ANTIGEN LEVEL, Serum [ECLIA]</b>	3.67 ng/mL	0 - 5
---	------------	-------





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)

<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

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>	16.10 ug/dL	6.02 - 18.4
--	-------------	-------------

<b>DEHYDRO-EPIANDRO STERONE SULPHATE, Serum [ECLIA]</b>	19.10 µg/dL	18.9-205
---	-------------	----------

This assay is useful in identification of androgen secreting adrenal tumours. It is an adjunct in the diagnosis of Congenital adrenal hyperplasia. It is also useful in the diagnosis of Premature adrenarche. In women, DHEAS levels are often measured, along with other hormones to help diagnose polycystic ovary syndrome (PCOS) and to help rule out other causes of infertility, amenorrhea, and hirsutism.

<b>IN SULIN LEVEL (FASTING ), Plasma [ECLIA]</b>	7.05 µIU/mL	2.6-24.9
--	-------------	----------

- Insulin is a hormone that is produced and stored in the beta cells of the pancreas.
- It regulates the uptake and utilization of glucose and is also involved in protein synthesis and triglyceride storage.
- Type 1 diabetes is caused by insulin deficiency due to destruction of insulin-producing pancreatic islet (beta) cells. Type 2 diabetes is characterized by insulin resistance.
- This assay is useful in the management of Diabetes, Insulinoma when used in conjunction with Proinsulin and C-peptide measurement, and evaluation of polycystic ovary syndrome.
- A single random blood sample for insulin may provide insufficient information due to wide variation in the time responses of insulin levels.

<b>C-PEPTIDE LEVEL, Serum [ECLIA]</b>	2.53 ng/mL	1.1 - 4.4
---------------------------------------	------------	-----------

<b>ANTI THYROGLOBULIN ANTIBODIES, Serum (CMIA)</b>	1.79 IU/mL	0 - 4.11
--	------------	----------

<b>ANTI THYROID PEROXIDASE, Serum (CMIA)</b>	0.38 IU/mL	0 - 5.61
--	------------	----------

#### **ANTI CYCLIC CITRULLINATED PEPTIDE**

<b>ANTI-CYCCLIC CITRULLINATED PEPTIDE, Serum [CMIA]</b>	0.50 U/mL	0 - 5
---	-----------	-------

Anti-CCP is a Chemiluminescent Microparticle immunoassay (CMIA) for determination of the IgG class of autoantibodies specific to cyclic citrullinated peptide (CCP) in human serum and plasma. The test provides additional tool in the diagnosis of





**Sample Collection Date** 31-12-2020 09:52 **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200163442 **Age / Sex** 58 Years / FEMALE  
**Name** MS. AMRITA BAKSHI

**Test (Methodology)** **Result** **Biological Reference Interval**  
patients with rheumatoid arthritis.

® TESTOSTERONE LEVEL (TOTAL), Serum [ECLIA] 0.47 ng/mL 0.029 - 0.408

#### THYROID PROFILE

FREE TRIIODOTHYRONINE [FT3], Serum [ECLIA] 2.55 pg/mL 2.00-4.40

FREE THYROXINE [FT4], Serum [ECLIA] 1.20 ng/dL 0.93-1.70

T.S.H.[ULTRASENSITIVE], Serum [ECLIA] 3.65  $\mu$ IU/mL 0.27-4.20

- Thyroid profile is done to evaluate thyroid gland function and help diagnose thyroid disorders causing hypothyroidism (decreased thyroid activity) and hyperthyroidism (increased thyroid activity).

- The most common causes of thyroid dysfunction are autoimmune diseases. Graves-disease causes hyperthyroidism and Hashimoto thyroiditis causes hypothyroidism. Both hyperthyroidism and hypothyroidism can also be caused by thyroiditis, thyroid cancer.

- Assays detecting unbound or free form of thyroid hormones are highly sensitive to detect thyroid dysfunction. They reflect the active form of the hormone, unaffected by non-thyroidal factors.

- The FT3 and FT4 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 and preterm thyroid profiles should be interpreted with caution.

#### Biological reference Interval:

Age Group	FT3 in pg/mL	FT4 in ng/dL	TSH in $\mu$ IU/ml
<12 months	2.9 - 6.8	1.1 - 2.0	1.36 - 8.8
1 - 6 Years	2.5 - 5.3	0.9 - 1.7	0.85 - 6.5
7 - 12 Years	2.5 - 5.6	1.1 - 1.7	0.28 - 4.3
13 - 17 Years	2.4 - 5.0	1.1 - 1.8	0.28 - 4.3
Adults	2.0 - 4.4	0.93 - 1.7	0.27 - 4.2
Cord Blood >37 Weeks	Not available	1.1 - 2.0	2.3 - 13.2

Pregnancy	FT3 in pg/mL	FT4 in ng/dL	TSH in $\mu$ IU/mL (As per American Thyroid Association)
1st Trimester	2.5 - 3.9	0.9 - 1.5	0.100 - 2.500
2nd Trimester	2.1 - 3.6	0.8 - 1.3	0.200 - 3.000
3rd Trimester	2.0 - 3.3	0.7 - 1.2	0.300 - 3.000

NOTE: TSH LEVELS ARE SUBJECT TO CIRCADIAN VARIATION, REACHING PEAK LEVELS BETWEEN 2-4 A.M. AND AT A MINIMUM BETWEEN 6-10 P.M. THE VARIATION IS OF THE ORDER OF 50 TO 206%, HENCE TIME OF THE DAY HAS INFLUENCE ON THE MEASURED SERUM TSH CONCENTRATION S. (REF: TIETZ TEXTBOOK OF CLINICAL CHEMISTRY AND MOLECULAR DIAGNOSTICS-5TH EDITION Page 123). FLUCTUATING TSH VALUES SHOULD BE CLINICALLY CORRELATED.

IgE LEVEL, Serum [ECLIA] 60.26 IU/mL 5 - 100





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

#### 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]	45.30 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.

VITAMIN B-12 LEVEL,Serum[ECLIA]	616.50 pg/mL	197 - 771
---------------------------------	--------------	-----------

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





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

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

**FOLIC ACID LEVEL, Serum [ CMIA ]** 16.50 ng/mL 3.1 - 20.5

- 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.

**ZINC, Serum[ Colorimetric ]** 141.4 µg/dL 65-256

**IRON, Serum [ Direct Colorimetric Assay ]** 75.00 µg/dL 60 - 170

**T.I.B.C. [ Calculated ]** 331.00 µg/dL 250 - 450

**U.I.B.C. Serum[ Direct Determination with Ferrozine ]** 256.00 µg/dL 135-392

**TRANSFERRIN SATURATION[ calculated ]** 22.66 % 20-50

**FERRITIN LEVEL, Serum[ ECLIA ]** 57.44 ng/mL

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





**Sample Collection Date** 31-12-2020 09:52      **DDL Center** Dr.Dangs Lab  
**Lab Ref. No.** 200163442      **Age / Sex** 58 Years / FEMALE  
**Name** MS. AMRITA BAKSHI

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
6 Months-15 Years	10.0 - 140.0	

**GLYCOSYLATED HAEMOGLOBIN [HbA1C]**

GLYCOSYLATED HAEMOGLOBIN [HbA1C],Whole Blood[HPLC]	5.20 %	4.4-6.5
--	--------	---------

*Mean Plasma Glucose	108 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.

As per American Diabetes Association (ADA)	
Reference Group	HbA1c in %
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



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)

<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

<b>Test (Methodology)</b>		<b>Result</b>	<b>Biological Reference Interval</b>
<b>SEROLOGY &amp; IMMUNOLOGY</b>			
RHEUMATOID FACTOR , Serum	[ Immunoturbidimetric Assay ]	11.50 IU/mL	0 - 14
TESTOSTERONE LEVEL [FREE], Serum	[ Chemiluminescence ]	1.81 pg/mL	0 - 4.2
C-REACTIVE PROTEIN [High Sensitivity], Serum	[ Immunoturbidimetry ]	0.10 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 \*\***





<b>Sample Collection Date</b>	31-12-2020 09:52	<b>DDL Center</b>	Dr.Dangs Lab
<b>Lab Ref. No.</b>	200163442		
<b>Name</b>	MS. AMRITA BAKSHI	<b>Age / Sex</b>	58 Years / FEMALE

<b>Test (Methodology)</b>	<b>Result</b>	<b>Biological Reference Interval</b>
<b>IMMUNOGLOBULIN ASSAY</b>		
IgA, Serum [ Immuno Turbidimetric Assay ]	97.00 mg /dL	70 - 400
IgG, Serum [ Immuno Turbidimetric Assay ]	890.00 mg /dL	700 - 1600
IgM, Serum [ Immuno Turbidimetric Assay ]	78.00 mg /dL	40 - 230

**\*\* End of IMMUNOGLOBULIN ASSAY Report \*\***

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

Authentication : 31-12-2020 12:35  
Printed on : 31-12-2020 16:02

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

Reports for the following tests may be collected as follows:

Report for ALIP,AMA,ASMA,FL ds DNA may be collected on Jan 7 from 5.00PM to 6:30PM

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.



@drdangslab

