Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
Lab Ref. No.	210024712		
Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
HAEMATOLOGY		
COMPLETE BLOOD COUNT		
HAEMOGLOBIN	**9.4 g/dL**	11 - 15
TOTAL LEUCOCYTE COUNT	7220 Cells/cu.mm	4000 - 11000
RED BLOOD CELL COUNT	4.76 mill/cu.mm	4.2 - 5.5
PACKED CELL VOLUME	**30.90 %**	36 - 46
MCV (MEAN CORPUSCULAR VOLUME)	**64.92 fL**	79 - 98
MCH (MEAN CORPUSCULAR HB)	**19.75 pg**	26 - 32
MCHC (MEAN CORPUSCULAR HB CONC)	30.42 g/dL	30 - 36
RED CELL DISTRIBUTION WIDTH	**15.60 %**	11.5 - 15.5
PLATELET COUNT	374000 /cu.mm	150000 - 450000
DIFFERENTIAL LEUCOCYTE COUNT		
SEGMENTED NEUTROPHILS	59 %	40 - 80
LYMPHOCYTES	33 %	20 - 40
MONOCYTES	5 %	2 - 10
EOSINOPHILS	2 %	1 - 6
BASOPHILS	1 %	0 - 2
ABSOLUTE LEUCOCYTE COUNT		
NEUTROPHIL	4260 cells/mm3	1800-7700
LYMPHOCYTE	2383 cells/mm3	1000-4800
MONOCYTE	361 cells/mm3	0-800
EOSINOPHIL	144 cells/mm3	0-450
BASOPHIL	72 cells/mm3	0-200

BLOOD PICTURE

RBCs are microcytic hypochromic with some elliptocytes and target cells. WBC series shows normal total and differential leucocyte count. Platelets are adequate on smear.

Impression: Microcytic hypochromic anemia
Please correlate with Serum iron studies with ferritin,HbHPLC if etiology not known

Sample Type: K2 EDTA Whole blood
Methodology: Automated cell counter, Sysmex XN-1000 based on Optical / Fluorescence / Flow Cytometry / SLS .

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

Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
Lab Ref. No.	210024712		
Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval

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

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

Authentication : 09-02-2021 16:02
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Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
Lab Ref. No.	210024712		
Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
HAEMATOLOGY		
ERYTHROCYTE SEDIMENTATION RATE		
E.S.R.WESTERGREN [Automated]	**21 mm 1st Hr**	0 - 20

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

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

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

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Printed on : 09-02-2021 16:59

Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
Lab Ref. No.	210024712		
Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
BIOCHEMISTRY & IMMUNOTURBIDIMETRY		
HOMOCYSTEINE LEVEL,Serum [CMIA]	8.81 µmol/L	5.0-15.0
GLUCOSE Fasting ,Plasma [HexoKinase]	88.00 mg/dL	60 - 100
C.P.K. ,Serum [U.V.Assay]	53.00 U/L	26 - 192
MAGNESIUM,Serum [Chlorophosphonazo III]	1.80 mg/dL	1.6-2.6
LIPID PROFILE		
CHOLESTEROL,Serum [Enzymatic Assay]	154.00 mg/dL	130 - 220
TRIGLYCERIDES,Serum [Enzymatic Colorimetric]	113.00 mg/dL	50 - 150
H.D.L. CHOLESTEROL,Serum [Homogeneous Enzymatic]	47.00 mg/dL	30 - 75
L.D.L. CHOLESTEROL,Serum [Homogeneous Enzymatic Assay]	94.00 mg/dL	30 - 100
VLDL CHOLESTEROL,Serum [Calculated]	22.60 mg/dL	10 - 30
NON H.D.L. CHOLESTEROL,Serum [Calculated]	107.00 mg/ dL	
CHOLESTEROL-HDL RATIO,Serum [Calculated]	3.28 : 1	
CHOLESTEROL-TRIGLYCERIDE RATIO,Serum [Calculated]	1.36 : 1	
KIDNEY FUNCTION TEST		
UREA,Serum [Kinetic Method]	18.50 mg/dL	10 - 50
BUN (BLOOD UREA NITROGEN),Serum	8.64 mg/dL	4.7 - 23.4
CREATININE,Serum [Kinetic Jaffe's method]	0.59 mg/dL	0.5-1.3
URIC ACID,Serum [Enzymatic Assay]	5.30 mg/dL	2 - 7
IONIZED CALCIUM,Serum [BAPTA Method]	1.19 mmol/L	1.1-1.25
TOTAL CALCIUM,Serum [BAPTA Method]	9.52 mg/dL	8.6-10
PHOSPHORUS,Serum [Molybdate UV]	3.70 mg/dL	2.5-4.5
SODIUM,Serum [Ion selective electrode]	137.00 mmol/L	132 - 150
POTASSIUM,Serum [Ion selective electrode]	4.30 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
BILIRUBIN (DIRECT),Serum [Diazo Method]	0.20 mg/dL	0-0.30
BILIRUBIN (INDIRECT),Serum [Calculated]	0.30 mg/dL	0.1 - 0.8
S.G.O.T. Serum [Kinetic Method]	18.00 U/L	5 - 32
S.G.P.T. Serum [Kinetic Method]	13.00 U/L	5 - 33
ALKALINE PHOSPHATASE,Serum [Kinetic (PNP)]	104.00 U/L	35 - 104
G.G.T.P. Serum [Enzymatic Assay]	10.00 U/L	6 - 42

Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
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Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
TOTAL PROTEINS,Serum [Biuret method]	7.30 g/dL	6 - 8.5
ALBUMIN,Serum [Colorimetric BCG]	4.40 g/dL	3.5 - 5
GLOBULIN,Serum [Calculated]	2.90 g/dL	
ALBUMIN/GLOBULIN RATIO,Serum [Calculated]	1.52	1.1 - 2.2

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

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

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

Authentication : 09-02-2021 15:42
Printed on : 09-02-2021 16:59

Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
Lab Ref. No.	210024712		
Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
IMMUNO ASSAYS		
PROLACTIN LEVEL, Serum [ECLIA]	7.43 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).

Test (Methodology)	Result	Biological Reference Interval
® **CORTISOL LEVEL (Basal), Serum** [CLIA]	**5.28 ug/dL**	6.02 - 18.4
IRON, Serum [Direct Colorimertric Assay]	64.00 µg/dL	60 - 170
T.I.B.C. [Calculated]	383.00 µg/dL	250 - 450
U.I.B.C. Serum [Direct Determination with FerroZine]	319.00 µg/dL	135-392
TRANSFERRIN SATURATION [Calculated]	**16.71 %**	20-50
FERRITIN LEVEL, Serum [ECLIA]	23.85 ng/mL	

- Ferritin test is used to assess body's current store of iron and to evaluate the severity of anemia or iron overload.
- Ferritin is also an acute phase reactant.
- The concentration of serum ferritin corresponds with that of tissue ferritin and correlates with body iron stores in the absence of inflammation.
- This assay is clinically useful in distinguishing between Iron deficiency anemia (low level) and anemia of chronic disease (normal or high level).
- It is elevated in inflammation and infections, in iron overload states and also in some malignancies.
- A low serum ferritin reflects depleted iron stores but not necessarily the severity of depletion, as it progresses.
- Serum ferritin is of limited usefulness in diagnosing iron deficiency during pregnancy, as concentration falls during late pregnancy, even when bone marrow iron is present.
- Reference ranges updated. Please correlate results clinically.

Biological reference Interval:

Adults:

Males:	20 - 250 ng/mL
Females:	10 - 120 ng/mL

Children:

Newborn:	25 - 200 ng/mL
1 Month:	200 - 600 ng/mL
2 - 5 Months:	50 - 200 ng/mL
6 Months - 15 yr:	07 - 140 ng/mL

Sample Collection Date	09-02-2021 14:27	**DDL Center**	Dr.Dangs Lab
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Name	MS. VAISHALI JAIN	**Age / Sex**	48 Years / FEMALE

Test (Methodology)	Result	Biological Reference Interval
THYROID PROFILE		
FREE TRIIODOTHYRONINE [FT3], Serum [ECLIA]	2.77 pg/mL	2.00-4.40
FREE THYROXINE [FT4], Serum [ECLIA]	1.36 ng/dL	0.93-1.70
T.S.H.[ULTRASENSITIVE], Serum [ECLIA]	2.67 µIU/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 uIU/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 uIU/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 CONCENTRATIONS. (REF: TIETZ TEXTBOOK OF CLINICAL CHEMISTRY AND MOLECULAR DIAGNOSTICS-5TH EDITION Page 123). FLUCTUATING TSH VALUES SHOULD BE CLINICALLY CORRELATED.

GLYCOSYLATED HAEMOGLOBIN [HBA1C]

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Test (Methodology)	Result	Biological Reference Interval
GLYCOSYLATED HAEMOGLOBIN [HBA1C],Whole Blood [HPLC]	5.60 %	4.4-6.5
*Mean Plasma Glucose	122 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.

IgE LEVEL,Serum [ECLIA]	23.85 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 immunedeficiency 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 upto 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 B-12 LEVEL,Serum [ECLIA]	469.70 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

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Test (Methodology)	Result	Biological Reference Interval

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.

VITAMIN D-3 LEVEL, Serum [ECLIA]	35.30 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.

**** End of IMMUNO ASSAYS Report ****

® MARKED RESULT IS RECHECKED AND VERIFIED

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

DR. MANAVI DANG
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(Associate Director)

Authentication : 09-02-2021 15:42
Printed on : 09-02-2021 16:59

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** 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 or mail us at **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.
- * For any change in timings, please visit our website.

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