

**REPORT**

Name	: Mrs. MANUSHI	Sample ID	: 24754109
Age/Gender	: 38 Years/Female	Reg. No	: 0312312130014
Referred by	: Dr. SELF	SPP Code	: SPL-STS-554
Referring Customer	: V CARE MEDICAL DIAGNOSTICS -TS	Collected On	: 13-Dec-2023 10:17 AM
Primary Sample	: Whole Blood	Received On	: 13-Dec-2023 12:47 PM
Sample Tested In	: Serum	Reported On	: 13-Dec-2023 04:06 PM
Client Address	: Kimtee Colony ,Gokul Nagar,Tarnaka.	Report Status	: Final Report

**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Copper</b>	101.2	µg/dL	80-155	Spectrophotometry
<b>Zinc - Serum</b>	89.7	µg/dL	80-120	Bromo-Paps
<b>Vitamin Profile</b>				
25 - Hydroxy Vitamin D	<b>21.36</b>	ng/mL	<20.0-Deficiency 20.0-<30.0-Insufficiency 30.0-100.0-Sufficiency >100.0-Potential Intoxication	CLIA
Vitamin B12 (Cyanocobalamin)	594	pg/mL	197 - 771	CLIA

**Interpretation:**

This test is most often done when other blood tests suggest a condition called megaloblastic anemia. Pernicious anemia is a form of megaloblastic anemia caused by poor vitamin B12 absorption. This can occur when the stomach makes less of the substance the body needs to properly absorb vitamin B12.

**Causes of vitamin B12 deficiency include: Diseases that cause malabsorption**

- Lack of intrinsic factor, a protein that helps the intestine absorb vitamin B12
- Above normal heat production (for example, with hyperthyroidism)

**An increased vitamin B12 level is uncommon in:**

- Liver disease (such as cirrhosis or hepatitis)
- Myeloproliferative disorders (for example, polycythemia vera and chronic myelogenous leukemia)

**Interpretation:**

- Vitamin D helps your body absorb calcium and maintain strong bones throughout your entire life. Your body produces vitamin D when the sun's UV rays contact your skin. Other good sources of the vitamin include fish, eggs, and fortified dairy products. It's also available as a dietary supplement.
- Vitamin D must go through several processes in your body before your body can use it. The first transformation occurs in the liver. Here, your body converts vitamin D to a chemical known as 25-hydroxyvitamin D, also called calcidiol.
- The 25-hydroxy vitamin D test is the best way to monitor vitamin D levels. The amount of 25-hydroxyvitamin D in your blood is a good indication of how much vitamin D your body has. The test can determine if your vitamin D levels are too high or too low.
- The test is also known as the 25-OH vitamin D test and the calcidiol 25-hydroxycholecalciferol test. It can be an important indicator of osteoporosis (bone weakness) and rickets (bone malformation).

**Those who are at high risk of having low levels of vitamin D include:**

- people who don't get much exposure to the sun
- older adults
- people with obesity.
- dietary deficiency

**Increased Levels:**

- Vitamin D Intoxication



*Dr. Vaishnavi*  
**DR. VAISHNAVI**  
**MD BIOCHEMISTRY**

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Cardiac Risk Markers(5)</b>				
Apolipoprotein (APO-B)	78	mg/dL	60.0-140.0	Immunoturbidimetry
Apolipoprotein B/A1 Ratio	1		0.35 - 1.00	Calculation
Apolipoprotein(APO A1)	110	mg/dL	105.0-175.0	Immunoturbidimetry
Homocysteine-Serum	10.2	µmol/L	3.7 - 13.9	CLIA
High Sensitivity C-Reactive Protein(hsCRP)	0.60	mg/L	Low Risk :< 1.0 Average Risk:1.0-3.0 High Risk: > 3.0	Immunoturbidimetry
Lipoprotein (a) - Lp(a)	18.89	mg/dL	< 30.0	Immunoturbidimetry

Result rechecked and verified for abnormal cases

\*\*\* End Of Report \*\*\*



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**REPORT**

Name	: Mrs. MANUSHI	Sample ID	: 24754110
Age/Gender	: 38 Years/Female	Reg. No	: 0312312130014
Referred by	: Dr. SELF	SPP Code	: SPL-STS-554
Referring Customer	: V CARE MEDICAL DIAGNOSTICS -TS	Collected On	: 13-Dec-2023 10:17 AM
Primary Sample	: Whole Blood	Received On	: 13-Dec-2023 12:41 PM
Sample Tested In	: Whole Blood EDTA	Reported On	: 13-Dec-2023 02:49 PM
Client Address	: Kimtee Colony ,Gokul Nagar,Tarnaka.	Report Status	: Final Report

**HAEMATOLOGY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Complete Blood Picture(CBP)</b>				
Haemoglobin (Hb)	10.3	g/dL	12-15	Cynmeth Method
Haematocrit (HCT)	35.1	%	40-50	Calculated
RBC Count	4.38	10 <sup>12</sup> /L	4.5-5.5	Cell Impedance
MCV	80	fl	81-101	Calculated
MCH	23.5	pg	27-32	Calculated
MCHC	29.3	g/dL	32.5-34.5	Calculated
RDW-CV	16.4	%	11.6-14.0	Calculated
Platelet Count (PLT)	150	10 <sup>9</sup> /L	150-410	Cell Impedance
Total WBC Count	6.8	10 <sup>9</sup> /L	4.0-10.0	Impedance
<b>Differential Leucocyte Count (DC)</b>				
Neutrophils	70	%	40-70	Cell Impedance
Lymphocytes	25	%	20-40	Cell Impedance
Monocytes	03	%	2-10	Microscopy
Eosinophils	02	%	1-6	Microscopy
Basophils	0	%	1-2	Microscopy
Absolute Neutrophils Count	4.76	10 <sup>9</sup> /L	2.0-7.0	Impedance
Absolute Lymphocyte Count	1.7	10 <sup>9</sup> /L	1.0-3.0	Impedance
Absolute Monocyte Count	0.2	10 <sup>9</sup> /L	0.2-1.0	Calculated
Absolute Eosinophils Count	0.14	10 <sup>9</sup> /L	0.02-0.5	Calculated
Absolute Basophil ICount	0.00	10 <sup>9</sup> /L	0.0-0.3	Calculated
Morphology	Anisocytosis with Normocytic normochromic and few Microcytic hypochromic			PAPs Staining
<b>Blood Picture - Peripheral Smear Examination</b>				
Red Blood Cells	Normocytic normochromic and few Microcytic hypochromic			Microscopy
White Blood Cells	Within normal limits			Microscopy
Platelets	Adequate			Microscopy
Hemoparasites	Not seen.			Microscopy
Impression	Anisocytosis with Normocytic normochromic and few Microcytic hypochromic			
Advice	Correlate clinically.			

\*\*\* End Of Report \*\*\*



Swarnabala .M  
DR.SWARNA BALA  
MD PATHOLOGY

Result rechecked and verified for abnormal cases

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Sample Tested In	: Whole Blood EDTA	Reported On	: 13-Dec-2023 02:53 PM
Client Address	: Kimtee Colony ,Gokul Nagar,Tarnaka.	Report Status	: Final Report

**HAEMATOLOGY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
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<b>Erythrocyte Sedimentation Rate (ESR)</b>	<b>14</b>		10 or less	Westergren method
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**Comments :** ESR is an acute phase reactant which indicates presence and intensity of an inflammatory process. It is never diagnostic of a specific disease. It is used to monitor the course or response to treatment of certain diseases. Extremely high levels are found in cases of malignancy, hematologic diseases, collagen disorders and renal diseases.



Swarnabala .M  
DR.SWARNA BALA  
MD PATHOLOGY



**REPORT**

Name	: Mrs. MANUSHI	Sample ID	: 24754112
Age/Gender	: 38 Years/Female	Reg. No	: 0312312130014
Referred by	: Dr. SELF	SPP Code	: SPL-STS-554
Referring Customer	: V CARE MEDICAL DIAGNOSTICS -TS	Collected On	: 13-Dec-2023 10:17 AM
Primary Sample	: Whole Blood	Received On	: 13-Dec-2023 12:47 PM
Sample Tested In	: Plasma-NaF(F)	Reported On	: 13-Dec-2023 01:48 PM
Client Address	: Kimtee Colony ,Gokul Nagar,Tarnaka.	Report Status	: Final Report

**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
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<b>Glucose Fasting (F)</b>	88	mg/dL	70-100	GOD-POD
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Interpretation of Plasma Glucose based on ADA guidelines 2018

Diagnosis	FastingPlasma Glucose(mg/dL)	2hrsPlasma Glucose(mg/dL)	HbA1c(%)	RBS(mg/dL)
Prediabetes	100-125	140-199	5.7-6.4	NA
Diabetes	> = 126	> = 200	> = 6.5	>=200(with symptoms)

Reference: Diabetes care 2018;41(suppl.1):S13-S27

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**MD BIOCHEMISTRY**

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Sample Tested In	: Whole Blood EDTA, Serum	Reported On	: 13-Dec-2023 03:49 PM
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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Glycated Hemoglobin (HbA1c)</b>	5.5	%	Non Diabetic:< 5.7 Pre diabetic: 5.7-6.4 Diabetic:>= 6.5	HPLC
<b>Mean Plasma Glucose</b>	111.15	mg/dL		Calculated

**Interpretation:**

- Glycated hemoglobins (GHb), also called glycohemoglobins, are substances formed when glucose binds to hemoglobin, and occur in amounts proportional to the concentration of serum glucose. Since red blood cells survive an average of 120 days, the measurement of GHb provides an index of a person's average blood glucose concentration (glycemia) during the preceding 2-3 months. Normally, only 4% to 6% of hemoglobin is bound to glucose, while elevated glycohemoglobin levels are seen in diabetes and other hyperglycemic states
- Mean Plasma Glucose(MPG):This Is Mathematical Calculations Where Glycated Hb Can Be Correlated With Daily Mean Plasma Glucose Level

**Testosterone Total** 35.74 ng/dL Refer Table CLIA

**Interpretation:**

**(Testosterone Reference Ranges)**

Age	Reference Range Male(ng/dL)	Reference Range Female(ng/dL)
Newborn(1-15days)	75-400	20-64
1-5 Months	1-177	1-5
6-11 Months	2-7	2-5
<b>Children:</b>		
1-5 Year	2-25	2-10
6-9 Year	3-30	2-20
<b>Puberty Tanner Stage</b>		
1	2-23	2-10
2	5-70	5-30
3	15-280	10-30
4	105-545	15-40
5	265-800	10-40
Adult	241-827	14-76

- Testosterone is a steroid hormone (androgen) made by the testes in males. Its production is stimulated and controlled by luteinising hormone (LH), which is manufactured in the pituitary gland. In males, testosterone stimulates development of secondary sex characteristics, including enlargement of the penis, growth of body hair and muscle, and a deepening voice. It is present in large amounts in males during puberty and in adult males to regulate the sex drive and maintain muscle mass. Testosterone is also produced by the adrenal glands in both males and females and, in small amounts, by the ovaries in females. The body can convert testosterone to oestradiol, the main sex hormone in females. There is great variability in testosterone levels between men and it is normal for testosterone levels to decline as men get older. Hypogonadism in a male refers to a reduction in sperm and/or testosterone production.

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Lipid Profile</b>				
Cholesterol Total	139	mg/dL	< 200	CHOD-POD
Triglycerides-TGL	126	mg/dL	< 150	GPO-POD
Cholesterol-HDL	41	mg/dL	40-60	Direct
Cholesterol-LDL	72.8	mg/dL	< 100	Calculated
Cholesterol- VLDL	25.2	mg/dL	7-35	Calculated
Non HDL Cholesterol	98	mg/dL	< 130	Calculated
Cholesterol Total /HDL Ratio	3.39	%	0-4.0	Calculated
HDL / LDL Ratio	0.56			
LDL/HDL Ratio	1.78	%	0-3.5	Calculated

The National Cholesterol Education program's third Adult Treatment Panel (ATPIII) has issued its recommendations on evaluating and treating lipid disorders for primary and secondary.

NCEP Recommendations	Cholesterol Total in (mg/dL)	Triglycerides in (mg/dL)	HDL Cholesterol (mg/dL)	LDL Cholesterol in (mg/dL)	Non HDL Cholesterol in (mg/dL)
Optimal	Adult: < 200 Children: < 170	< 150	40-59	Adult:<100 Children: <110	<130
Above Optimal	-----	-----		100-129	130 - 159
Borderline High	Adult: 200-239 Children:171-199	150-199		Adult: 130-159 Children: 111-129	160 - 189
High	Adult:>or=240 Children:>or=200	200-499	≥ 60	Adult:160-189 Children:>or=130	190 - 219
Very High	-----	>or=500		Adult: >or=190 -----	>=220

**Note:** LDL cholesterol cannot be calculated if triglyceride is >400 mg/dL (Friedewald's formula). Calculated values not provided for LDL and VLDL

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Liver Function Test (LFT)</b>				
Bilirubin(Total)	0.4	mg/dL	0.3-1.2	Diazo
Bilirubin (Direct)	0.1	mg/dL	0.0 - 0.2	Diazo
Bilirubin (Indirect)	0.3	mg/dL	0.2-1.0	Calculated
Aspartate Aminotransferase (AST/SGOT)	20	U/L	5-40	IFCC with out (P-5-P)
Alanine Aminotransferase (ALT/SGPT)	21	U/L	0-55	IFCC with out (P-5-P)
Alkaline Phosphatase(ALP)	61	U/L	40-150	Kinetic PNPP-AMP
Gamma Glutamyl Transpeptidase (GGTP)	39	U/L	5-55	IFCC
Protein - Total	7.2	g/dL	6.4-8.2	Biuret
Albumin	4.0	g/dL	3.4-5.0	Bromocresol purple (BCP)
Globulin	3.2	g/dL	2.0-4.2	Calculated
A:G Ratio	1.25	%	0.8-2.0	Calculated
SGOT/SGPT Ratio	0.95			

- **Alanine Aminotransferase(ALT)** is an enzyme found in liver and kidneys cells. ALT helps create energy for liver cells. Damaged liver cells release ALT into the bloodstream, which can elevate ALT levels in the blood.
- **Aspartate Aminotransferase (AST)** is an enzyme in the liver and muscles that helps metabolizes amino acids. Similarly to ALT, elevated AST levels may be a sign of liver damage or liver disease.
- **Alkaline phosphate (ALP)** is an enzyme present in the blood. ALP contributes to numerous vital bodily functions, such as supplying nutrients to the liver, promoting bone growth, and metabolizing fat in the intestines.
- **Gamma-glutamyl Transpeptidase (GGTP)** is an enzyme that occurs primarily in the liver, but it is also present in the kidneys, pancreas, gallbladder, and spleen. Higher than normal concentrations of GGTP in the blood may indicate alcohol-related liver damage. Elevated GGTP levels can also increase the risk of developing certain types of cancer.
- **Bilirubin** is a waste product that forms when the liver breaks down red blood cells. Bilirubin exits the body as bile in stool. High levels of bilirubin can cause jaundice - a condition in which the skin and whites of the eyes turn yellow- and may indicate liver damage.
- **Albumin** is a protein that the liver produces. The liver releases albumin into the bloodstream, where it helps fight infections and transport vitamins, hormones, and enzymes throughout the body. Liver damage can cause abnormally low albumin levels.

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
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**Thyroid Profile-I(TFT)**

<b>T3 (Triiodothyronine)</b>	91.45	ng/dL	70-204	CLIA
<b>T4 (Thyroxine)</b>	9.2	µg/dL	3.2-12.6	CLIA
<b>TSH -Thyroid Stimulating Hormone</b>	3.43	µIU/mL	0.35-5.5	CLIA

**Pregnancy & Cord Blood**

T3 (Triiodothyronine):	T4 (Thyroxine)	TSH (Thyroid Stimulating Hormone)
First Trimester : 81-190 ng/dL	15 to 40 weeks:9.1-14.0 µg/dL	First Trimester : 0.24-2.99 µIU/mL
Second&Third Trimester :100-260 ng/dL		Second Trimester: 0.46-2.95 µIU/mL
		Third Trimester : 0.43-2.78 µIU/mL
Cord Blood: 30-70 ng/dL	Cord Blood: 7.4-13.0 µg/dL	Cord Blood: : 2.3-13.2 µIU/mL

**Interpretation:**

- Thyroid gland is a butterfly-shaped endocrine gland that is normally located in the lower front of the neck. The thyroid's job is to make thyroid hormones, which are secreted into the blood and then carried to every tissue in the body. Thyroid hormones help the body use energy, stay warm and keep the brain, heart, muscles, and other organs working as they should.
- Thyroid produces two major hormones: triiodothyronine (T3) and thyroxine (T4). If thyroid gland doesn't produce enough of these hormones, you may experience symptoms such as weight gain, lack of energy, and depression. This condition is called hypothyroidism.
- Thyroid gland produces too many hormones, you may experience weight loss, high levels of anxiety, tremors, and a sense of being on a high. This is called hyperthyroidism.
- TSH interacts with specific cell receptors on the thyroid cell surface and exerts two main actions. The first action is to stimulate cell reproduction and hypertrophy. Secondly, TSH stimulates the thyroid gland to synthesize and secrete T3 and T4.
- The ability to quantitate circulating levels of TSH is important in evaluating thyroid function. It is especially useful in the differential diagnosis of primary (thyroid) from secondary (pituitary) and tertiary (hypothalamus) hypothyroidism. In primary hypothyroidism, TSH levels are significantly elevated, while in secondary and tertiary hypothyroidism, TSH levels are low.

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Iron Profile-I</b>				
Iron(Fe)	<b>32</b>	µg/dL	50-170	Ferene
Total Iron Binding Capacity (TIBC)	<b>468</b>	µg/dL	250-450	Ferene
Transferrin	327.27	mg/dL	250-380	Calculated
Iron Saturation((% Transferrin Saturation)	<b>6.84</b>	%	15-50	Calculated
Unsaturated Iron Binding Capacity (UIBC)	<b>436</b>	ug/dL	110-370	FerroZine

**Interpretation:**

- Serum transferrin (and TIBC) high, serum iron low, saturation low. Usual causes of depleted iron stores include blood loss, inadequate dietary iron. RBCs in moderately severe iron deficiency are hypochromic and microcytic. Stainable marrow iron is absent. Serum ferritin decrease is the earliest indicator of iron deficiency if inflammation is absent.
- **Anemia of chronic disease:** Serum transferrin (and TIBC) low to normal, serum iron low, saturation low or normal. Transferrin decreases with many inflammatory diseases. With chronic disease there is a block in movement to and utilization of iron by marrow. This leads to low serum iron and decreased erythropoiesis. Examples include acute and chronic infections, malignancy and renal failure.
- **Sideroblastic Anemia:** Serum transferrin (and TIBC) normal to low, serum iron normal to high, saturation high.
- **Hemolytic Anemia:** Serum transferrin (and TIBC) normal to low, serum iron high, saturation high.
- **Hemochromatosis:** Serum transferrin (and TIBC) slightly low, serum iron high, saturation very high.
- **Protein depletion:** Serum transferrin (and TIBC) may be low, serum iron normal or low (if patient also is iron deficient). This may occur as a result of malnutrition, liver disease, renal disease.
- **Liver disease:** Serum transferrin variable; with acute viral hepatitis, high along with serum iron and ferritin. With chronic liver disease (eg, cirrhosis), transferrin may be low. Patients who have cirrhosis and portacaval shunting have saturated TIBC/transferrin as well as high ferritin.

Result rechecked and verified for abnormal cases

\*\*\* End Of Report \*\*\*

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**CLINICAL BIOCHEMISTRY**

**AROGYAM 1.3 PROFILE**

Test Name	Results	Units	Ref. Range	Method
<b>Renal Profile (5)</b>				
Calcium	8.8	mg/dL	8.5-10.1	o-cresolphthalein complexone (OCPC)
Uric Acid	5.1	mg/dL	2.6-6.0	Uricase
Blood Urea Nitrogen (BUN)	8.0	mg/dL	7.0-18.0	Calculated
Creatinine -Serum	0.96	mg/dL	0.60-1.10	Sarcosine oxidase
BUN / Creatinine Ratio	8.33		6 - 22	
Urea-Serum	17.4	mg/dL	12.8-42.8	Glutamate dehydrogenase+Calculation

Correlate Clinically.

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\*\*\* End Of Report \*\*\*



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