




















LABORATORY TEST REPORT

Name	: Mr. RAM MURTHY K		
Sample ID	: A1308814		
Age/Gender	: 76 Years/Male	Reg. No	: 0312501020013
Referred by	: Dr. PADMANABHAN T N C	SPP Code	: SPL-CV-172
Referring Customer	: V CARE MEDICAL DIAGNOSTICS	Collected On	: 02-Jan-2025 08:14 AM
Primary Sample	: Whole Blood	Received On	: 02-Jan-2025 12:22 PM
Sample Tested In	: Whole Blood EDTA	Reported On	: 02-Jan-2025 03:16 PM
Client Address	: Kimtee colony , Gokul Nagar, Tarnaka	Report Status	: Final Report


HAEMATOLOGY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
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COMPLETE BLOOD COUNT (CBC)

 Haemoglobin (Hb) <small>(Method: Cymeth Method)</small>	15.0	g/dL	13-17
 RBC Count <small>(Method: Cell Impedance)</small>	5.50	10 ¹² /L	4.5-5.5
 Haematocrit (HCT) <small>(Method: Calculated)</small>	49.1	%	40-50
 MCV <small>(Method: Calculated)</small>	86	fl	81-101
 MCH <small>(Method: Calculated)</small>	27.0	pg	27-32
 MCHC <small>(Method: Calculated)</small>	32.5	g/dL	32.5-34.5
 RDW-CV <small>(Method: Calculated)</small>	14.6	%	11.6-14.0
 Platelet Count (PLT) <small>(Method: Cell Impedance)</small>	206	10 ⁹ /L	150-410
 Total WBC Count <small>(Method: Impedance)</small>	5.7	10 ⁹ /L	4.0-10.0
 Neutrophils <small>(Method: Cell Impedance)</small>	59	%	40-70
 Absolute Neutrophils Count <small>(Method: Impedance)</small>	3.36	10 ⁹ /L	2.0-7.0
 Lymphocytes <small>(Method: Cell Impedance)</small>	33	%	20-40
 Absolute Lymphocyte Count <small>(Method: Impedance)</small>	1.88	10 ⁹ /L	1.0-3.0
 Monocytes <small>(Method: Microscopy)</small>	06	%	2-10
 Absolute Monocyte Count <small>(Method: Calculated)</small>	0.34	10 ⁹ /L	0.2-1.0
 Eosinophils <small>(Method: Microscopy)</small>	02	%	1-6
 Absolute Eosinophils Count <small>(Method: Calculated)</small>	0.11	10 ⁹ /L	0.02-0.5
 Basophils <small>(Method: Microscopy)</small>	00	%	1-2
 Absolute Basophil ICount <small>(Method: Calculated)</small>	0.00	10 ⁹ /L	0.0-0.3

Morphology

WBC	Within Normal Limits
RBC	Anisocytosis with Normocytic normochromic
Platelets <small>(Method: Microscopy)</small>	Adequate.

*** End Of Report ***


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 Swarnabala - M
 DR.SWARNA BALA
 MD PATHOLOGY

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Primary Sample	: Whole Blood	Received On	: 02-Jan-2025 12:22 PM
Sample Tested In	: Whole Blood EDTA	Reported On	: 02-Jan-2025 03:50 PM
Client Address	: Kimtee colony ,Gokul Nagar,Tarnaka	Report Status	: Final Report



HAEMATOLOGY

SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
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 Erythrocyte Sedimentation Rate (ESR) <small>(Method: Westergren method)</small>	28	mm/hr	30 or less
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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.



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Swarnabala - M
DR.SWARNA BALA
MD PATHOLOGY

LABORATORY TEST REPORT

Name	: Mr. RAM MURTHY K	Reg. No	: 0312501020013
Sample ID	: A1309001, A1309000	SPP Code	: SPL-CV-172
Age/Gender	: 76 Years/Male	Collected On	: 02-Jan-2025 08:14 AM
Referred by	: Dr. PADMANABHAN T N C	Received On	: 02-Jan-2025 12:22 PM
Referring Customer	: V CARE MEDICAL DIAGNOSTICS	Reported On	: 02-Jan-2025 02:27 PM
Primary Sample	: Whole Blood	Report Status	: Final Report
Sample Tested In	: Plasma-NaF(F), Plasma-NaF(PP)		
Client Address	: Kimtee colony ,Gokul Nagar,Tarnaka		


CLINICAL BIOCHEMISTRY
GLUCOSE POST PRANDIAL (PP)

Test Name	Results	Units	Biological Reference Interval
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Glucose Fasting (F)	93	mg/dL	70-100
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(Method: Hexokinase)

Interpretation of Plasma Glucose based on ADA guidelines 2018

Diagnosis	Fasting Plasma Glucose(mg/dL)	2hrs Plasma 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

Glucose Post Prandial (PP)	116	mg/dL	70-140
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(Method: Hexokinase (HK))

Interpretation of Plasma Glucose based on ADA guidelines 2018

Diagnosis	Fasting Plasma Glucose(mg/dL)	2hrs Plasma 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

- Postprandial glucose level is a screening test for Diabetes Mellitus
- If glucose level is >140 mg/dL and <200 mg/dL, then GTT (glucose tolerance test) is advised.
- If level after 2 hours = >200 mg/dL diabetes mellitus is confirmed.
- Advise HbA1c for further evaluation.

*** End Of Report ***



DR. VAISHNAVI
MD BIOCHEMISTRY

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CLINICAL BIOCHEMISTRY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
Glycated Hemoglobin (HbA1c) <small>(Method: HPLC)</small>	5.7	%	Non Diabetic:< 5.7 Pre diabetic: 5.7-6.4 Diabetic:>= 6.5
Mean Plasma Glucose <small>(Method: Calculated)</small>	116.89	mg/dL	

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

NOTE: The above Given Risk Level Interpretation is not age specific and is an information resource only and is not to be used or relied on for any diagnostic or treatment purposes and should not be used as a substitute for professional diagnosis and treatment. Kindly Correlate clinically.

INTERPRETATION

Method: Analyzer Fully automated HPLC platform.

Average Blood Glucose (eAG) (mg/dL)	Level of Control	Hemoglobin A1c (%)
421		14%
386		13%
350		12%
314		11%
279		10%
243		9%
208		8%
172	POOR	7%
136	GOOD	6%
101	EXCELLENT	5%

HbA1c values of 5.0- 6.5 percent indicate good control or an increased risk for developing diabetes mellitus. HbA1c values greater than 6.5 percent are diagnostic of diabetes mellitus. Diagnosis should be confirmed by repeating the HbA1c test.

NOTE: Hb F higher than 10 percent of total Hb may yield falsely low results. Conditions that shorten red cell survival, such as the presence of unstable hemoglobins like Hb SS, Hb CC, and Hb SC, or other causes of hemolytic anemia may yield falsely low results. Iron deficiency anemia may yield falsely high results.

*** End Of Report ***



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CLINICAL BIOCHEMISTRY

SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
 Calcium (Method: Arsenazo)	9.15	mg/dL	8.5-10.1

Comments:

- Calcium in the body is found mainly in the bones (approximately 99%). In serum, Calcium exists in a free ionised form and in bound form (with Albumin). Hence, a decrease in Albumin causes lower Calcium levels and vice-versa.
- Calcium levels in serum depend on the Parathyroid Hormone.
- Increased Calcium levels are found in Bone tumors, Hyperparathyroidism. decreased levels are found in Hypoparathyroidism, renal failure, Rickets.

*** End Of Report ***



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CLINICAL BIOCHEMISTRY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
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Lipid Profile

 Cholesterol Total (Method: CHOD-POD)	123.7	mg/dL	< 200
 Triglycerides-TGL (Method: GPO-POD)	144.1	mg/dL	< 150
 Cholesterol-HDL (Method: Direct)	43.6	mg/dL	40-60
 Cholesterol-LDL (Method: Calculated)	51.28	mg/dL	< 100
 Cholesterol- VLDL (Method: Calculated)	28.82	mg/dL	7-35
 Non HDL Cholesterol (Method: Calculated)	80.1	mg/dL	< 130
 Cholesterol Total /HDL Ratio (Method: Calculated)	2.84	Ratio	0-4.0
 LDL/HDL Ratio (Method: Calculated)	1.18	Ratio	0-3.5

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
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
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Liver Function Test (LFT)

 Bilirubin(Total) <small>(Method: Diazo)</small>	0.98	mg/dL	0.2-1.2
 Bilirubin (Direct) <small>(Method: Diazo)</small>	0.31	mg/dL	0.0 - 0.3
 Bilirubin (Indirect) <small>(Method: Calculated)</small>	0.67	mg/dL	0.2-1.0
 Aspartate Aminotransferase (AST/SGOT) <small>(Method: IFCC UV Assay)</small>	18.5	U/L	5-48
 Alanine Aminotransferase (ALT/SGPT) <small>(Method: IFCC with out (P-S-P))</small>	14.4	U/L	0-55
 Alkaline Phosphatase(ALP) <small>(Method: Kinetic PNPP-AMP)</small>	63.9	U/L	30-120
 Gamma Glutamyl Transpeptidase (GGTP) <small>(Method: IFCC)</small>	16.9	U/L	15-85
 Protein - Total <small>(Method: Biuret)</small>	7.08	g/dL	6.4-8.2
 Albumin <small>(Method: Bromocresol Green (BCG))</small>	4.3	g/dL	3.4-5.0
 Globulin <small>(Method: Calculated)</small>	2.78	g/dL	2.0-4.2
 A:G Ratio <small>(Method: Calculated)</small>	1.55	Ratio	0.8-2.0
 SGOT/SGPT Ratio <small>(Method: Calculated)</small>	1.28	Ratio	<1.0

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.

*** End Of Report ***










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MD BIOCHEMISTRY

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CLINICAL BIOCHEMISTRY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
Kidney Profile-KFT			
 Creatinine (Method: Jaffes Kinetic)	0.90	mg/dL	0.70-1.30
 Urea-Serum (Method: Calculated)	36.0	mg/dL	17.1-49.2
 Blood Urea Nitrogen (BUN) (Method: Calculated)	16.81	mg/dL	8.0-23.0
BUN / Creatinine Ratio	18.68	Ratio	6 - 22
 Uric Acid (Method: UriCase)	5.60	mg/dL	3.5-7.2
 Sodium (Method: ISE Direct)	136	mmol/L	135-150
 Potassium (Method: ISE Direct)	3.9	mmol/L	3.5-5.0
 Chloride (Method: ISE Direct)	100	mmol/L	94-110

Interpretation:

- The kidneys, located in the retroperitoneal space in the abdomen, are vital for patient health. They process several hundred liters of fluid a day and remove around two liters of waste products from the bloodstream. The volume of fluid that passes through the kidneys each minute is closely linked to cardiac output. The kidneys maintain the body's balance of water and concentration of minerals such as sodium, potassium, and phosphorus in blood and remove waste by-products from the blood after digestion, muscle activity and exposure to chemicals or medications. They also produce renin which helps regulate blood pressure, produce erythropoietin which stimulates red blood cell production, and produce an active form of vitamin D, needed for bone health.








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 MD BIOCHEMISTRY

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CLINICAL BIOCHEMISTRY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
Iron Profile-I			
 Iron(Fe) <small>(Method: Ferrozine)</small>	109	µg/dL	65-175
 Total Iron Binding Capacity (TIBC) <small>(Method: Ferrozine)</small>	385	µg/dL	250-450
 Transferrin <small>(Method: Calculated)</small>	269.23	mg/dL	215-365
 Iron Saturation((% Transferrin Saturation) <small>(Method: Calculated)</small>	28.31	%	20-50
 Unsaturated Iron Binding Capacity (UIBC) <small>(Method: FerroZine)</small>	276	µg/dL	110 - 370

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.

*** End Of Report ***



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CLINICAL BIOCHEMISTRY
SAGEPATH CARE 1.2

Test Name	Results	Units	Biological Reference Interval
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Thyroid Profile-I(TFT)

 T3 (Triiodothyronine) <small>(Method: CLIA)</small>	110.12	ng/dL	40-181
 T4 (Thyroxine) <small>(Method: CLIA)</small>	7.6	µg/dL	3.2-12.6
 TSH -Thyroid Stimulating Hormone <small>(Method: CLIA)</small>	2.56	µIU/mL	0.35-5.5

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.

*** End Of Report ***



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