

# smart Health Report

An Insightful Health Analytics Report  
for Easier Understanding



Prepared For



Name Gender

Patient ID Age

### Your Health Summary

Understand Your Health At A Glance  
Your Personalized Health Summary is Now Available.

## Your Health at a Glance – A Personalized Journey

### Report Sections

- 1 Body Summary**  
 A visual snapshot of your overall health, simple and easy to understand
- 2 Quick Health Highlights**  
 Your health scores and a single view of all abnormal results for quick attention
- 3 Lab Report Overview**  
 Understand at a glance which tests are normal and which are abnormal
- 4 Personalized Health Advisory**  
 Actionable insights and expert guidance tailored just for you
- 5 Doctor's Reference Report**  
 Complete lab results with interpretations to share with your healthcare provider

### How to Read This Report

This comprehensive health report provides detailed insights into your test results. Each section offers different perspectives on your health status, from visual summaries to detailed analysis and personalized recommendations.

Name

Gender

Patient ID

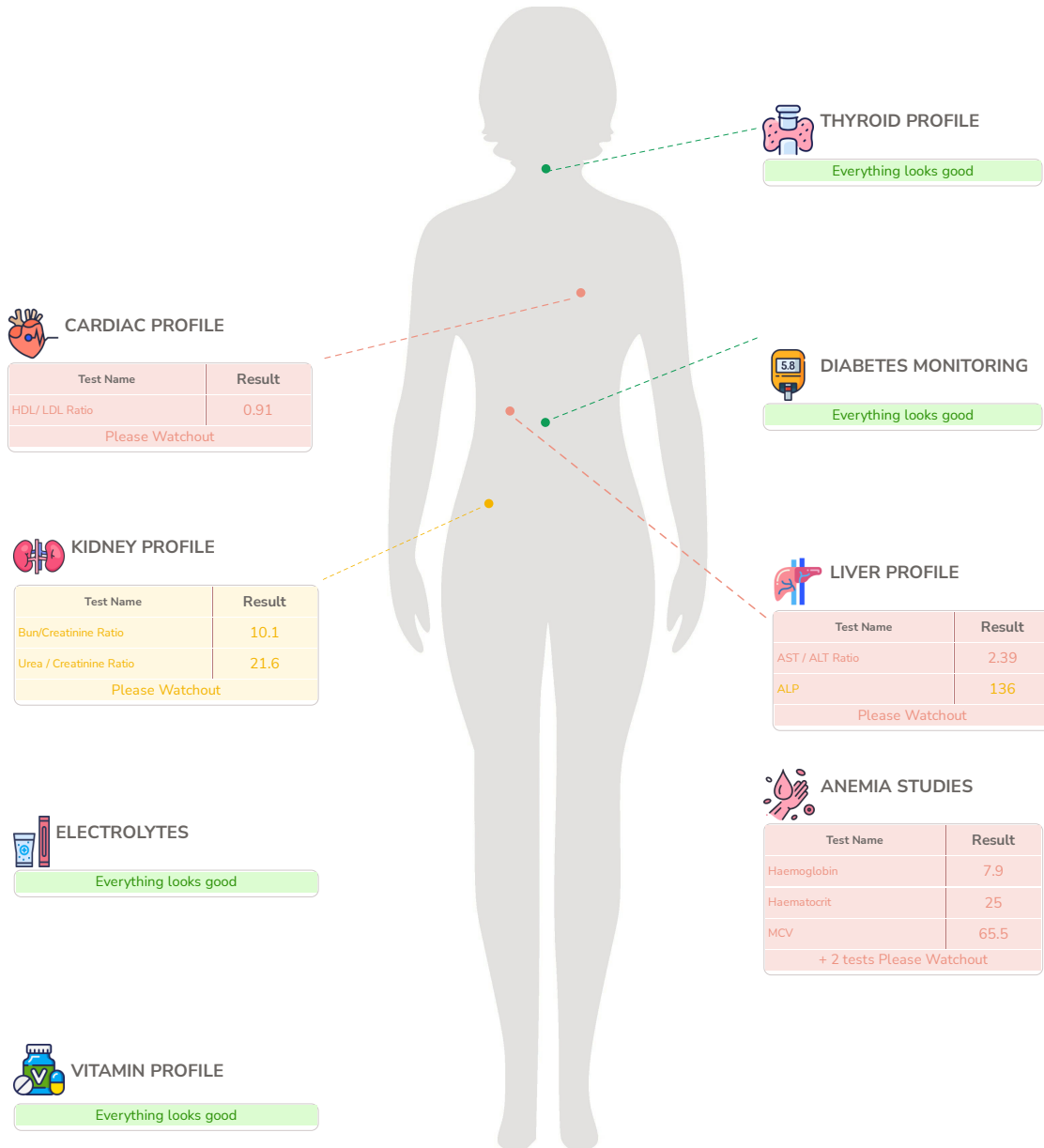
Age

## Your Health Summary

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● All In Range ● Borderline ● Out Of Range

## Health Summary



**Note:** This section offers a quick snapshot of selected parameters. For all parameters and detailed analysis with clinical interpretation, please refer to the following pages

Name Gender

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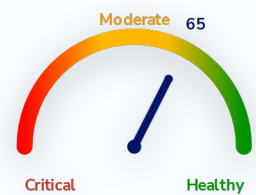
## Quick Health Summary

### Personal Insights - Health Score

# 65

Overall, most parameters are within normal ranges, indicating a generally balanced health status. The profiles of Blood Disorder, Allergy, Inflammation, Liver, Kidney, Cardiac Health, Pancreatic Disorders, Iron, Hormones, and others may affect your overall well-being and could benefit from attentive care. Consider maintaining a balanced diet rich in fruits, vegetables, and whole grains, along with regular physical activity such as walking or yoga. Routine check-ups are advisable to monitor your health, and consulting a healthcare professional when needed can support your wellness journey. Remember, small consistent changes can lead to meaningful improvements in your health.

Note - Higher scores tentatively indicate better health status



### Summary of Key Health Indicators

Total Parameters Tested	Borderline Results	Out Of Range Results
109	4	18

### Health Status by Body System

Profile	Total	Borderline	Out of Range	Key Results
Anemia Studies	9	0	5	<ul style="list-style-type: none"> <li>● Haemoglobin (7.9)</li> <li>● Haematocrit (25)</li> <li>● MCV (65.5)</li> <li>● MCH (20.8)</li> <li>● RDW-CV (19.2)</li> </ul>
Blood Disorder	17	1	4	<ul style="list-style-type: none"> <li>● Total Leukocyte Count (3)</li> <li>● Abs. Neutrophil Count (1.59)</li> <li>● Abs. Basophil Count (0.01)</li> <li>● P-LCC (19)</li> <li>● MPV (9.1)</li> </ul>
Iron	4	0	3	<ul style="list-style-type: none"> <li>● Iron (24)</li> <li>● UIBC (386)</li> <li>● % Saturation Transferrin (5.85)</li> </ul>

Profile	Total	Borderline	Out of Range	Key Results
Pancreas	2	0	2	<ul style="list-style-type: none"> <li>Lipase (81.3)</li> <li>Amylase (145)</li> </ul>
Inflammation	2	0	1	<ul style="list-style-type: none"> <li>ESR (47)</li> </ul>
Liver Profile	14	1	1	<ul style="list-style-type: none"> <li>AST / ALT Ratio (2.39)</li> <li>ALP (136)</li> </ul>
Cardiac Profile	11	0	1	<ul style="list-style-type: none"> <li>HDL : LDL ratio (0.91)</li> </ul>
Allergy Panel	1	0	1	<ul style="list-style-type: none"> <li>IgE Total (795.8)</li> </ul>
Infectious Diseases	4	0	0	All In Range
Diabetes Monitoring	4	0	0	All In Range
Kidney Profile	12	2	0	<ul style="list-style-type: none"> <li>BUN : Creatinine ratio (10.1)</li> <li>Urea : Creatinine ratio (21.6)</li> </ul>
Electrolytes	5	0	0	All In Range
Autoimmune Disorders	1	0	0	All In Range
Vitamin Profile	2	0	0	All In Range
Thyroid Profile	3	0	0	All In Range
Hormones	2	0	0	All In Range
Cancer Profile	3	0	0	All In Range
Urinalysis	12	0	0	All In Range

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## Report Summary ● In Range ● Borderline ● Out Of Range ● No color - Reference range not available

### ANEMIA STUDIES

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> Hemoglobin	<b>7.9</b> g/dL	12 - 15
<span style="color: red;">●</span> PCV	<b>25</b> %	36 - 46
<span style="color: red;">●</span> MCV	<b>65.5</b> fl	83 - 101
<span style="color: red;">●</span> MCH	<b>20.8</b> pg	27 - 32
<span style="color: green;">●</span> MCHC	31.7 g/dL	31.5 - 34.5
<span style="color: red;">●</span> RDW (CV)	<b>19.2</b> %	11.6 - 14
<span style="color: green;">●</span> RDW-SD	38.9 fl	35.1 - 43.9
Mentzer Index	17.24 %	
Red blood Cells	Absent /hpf	

### BLOOD DISORDER

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> TLC	<b>3</b> 10 <sup>^3</sup> μl	4 - 10
<span style="color: green;">●</span> Neutrophils	53 %	40 - 80
<span style="color: green;">●</span> Lymphocytes	36.9 %	20 - 40
<span style="color: green;">●</span> Monocytes	7.5 %	2 - 10
<span style="color: green;">●</span> Eosinophils	2.3 %	1 - 6
<span style="color: green;">●</span> Basophils	0.3 %	< 2
<span style="color: red;">●</span> Neutrophils.	<b>1.59</b> 10 <sup>^3</sup> μl	2 - 7
<span style="color: green;">●</span> Lymphocytes.	1.11 10 <sup>^3</sup> μl	1 - 3
<span style="color: green;">●</span> Monocytes.	0.23 10 <sup>^3</sup> μl	0.2 - 1
<span style="color: green;">●</span> Eosinophils.	0.07 10 <sup>^3</sup> μl	0.02 - 0.5
<span style="color: red;">●</span> Basophils.	<b>0.01</b> 10 <sup>^3</sup> μl	0.02 - 0.1
<span style="color: green;">●</span> Platelet Count	150 10 <sup>^3</sup> μl	150 - 410
<span style="color: orange;">●</span> Mean Platelet Volume (MPV)	<b>9.1</b> fL	9.3 - 12.1
<span style="color: green;">●</span> PDW	15.4 fL	8.3 - 25
<span style="color: green;">●</span> P-LCR	33.3 %	18 - 50
<span style="color: red;">●</span> P-LCC	<b>19</b> 10 <sup>^9</sup> /L	44 - 140
Platelet Morphology	Large platelets seen.	

### INFECTIOUS DISEASES

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> PCT	0.2 %	0.17 - 0.32
Deposit	Absent	
Yeast Cells	Absent	
Protozoa	Absent	

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### INFLAMMATION

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> ESR - Erythrocyte Sedimentation Rate	<b>47</b> mm/hr	< 35
<span style="color: green;">●</span> CRP (Quantitative)	< 1.0 mg/L	< 5

### DIABETES MONITORING

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Glycosylated Hemoglobin (HbA1c)	5.1 %	< 5.7
Estimated Average Glucose	99.67 mg/dL	
<span style="color: green;">●</span> Glucose Fasting	89.4 mg/dL	70 - 100
Urine Glucose (sugar)	Negative	

### LIVER PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Bilirubin Total	0.56 mg/dL	0.2 - 1.2
<span style="color: green;">●</span> Bilirubin Direct	0.26 mg/dL	< 0.5
<span style="color: green;">●</span> Bilirubin Indirect	0.3 mg/dL	0.1 - 1
<span style="color: green;">●</span> SGOT/AST	24 U/L	11 - 34
<span style="color: green;">●</span> SGPT/ALT	10.03 U/L	< 34
<span style="color: red;">●</span> SGOT/SGPT Ratio	<b>2.39</b> Ratio	< 0.99
<span style="color: orange;">●</span> Alkaline Phosphatase	<b>136</b> U/L	46 - 122
<span style="color: green;">●</span> Total Protein	7.8 g/dL	6.4 - 8.3
<span style="color: green;">●</span> Albumin	4.47 g/dL	3.2 - 4.6
<span style="color: green;">●</span> Globulin	3.33 g/dL	2.3 - 3.5
<span style="color: green;">●</span> Albumin :Globulin Ratio	1.34 Ratio	1.3 - 2.1
<span style="color: green;">●</span> Gamma Glutamyl Transferase (GGT)	13.29 U/L	< 38
Bilirubin Urine	Negative	
Urobilinogen	Normal	

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### KIDNEY PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Blood Urea	24.41 mg/dL	21 - 43
<span style="color: green;">●</span> Bun	11.41 mg/dL	8 - 23
<span style="color: green;">●</span> Creatinine	1.13 mg/dL	0.5 - 1.2
eGFR (CKD-EPI)	48.26 mL/min/1.73 sq m	
<span style="color: orange;">●</span> Bun/Creatinine Ratio	<b>10.1</b> Ratio	12 - 20
<span style="color: orange;">●</span> Urea / Creatinine Ratio	<b>21.6</b> Ratio	25.68 - 42.8
<span style="color: green;">●</span> Uric Acid	4.13 mg/dL	2.6 - 6
<span style="color: green;">●</span> Calcium Serum	9.4 mg/dL	8.4 - 10.2
Urine Protein (Albumin)	Negative	
Blood	Negative	
Crystals	Absent	
Cast	Absent	

### ELECTROLYTE PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Phosphorus	3.4 mg/dL	2.3 - 4.7
<span style="color: green;">●</span> Sodium	141 mmol/L	136 - 145
<span style="color: green;">●</span> Potassium	3.5 mmol/L	3.5 - 5.1
<span style="color: green;">●</span> Chloride	107 mmol/L	98 - 107
<span style="color: green;">●</span> Magnesium, Serum	2.18 mg/dL	1.6 - 2.6

### CARDIAC PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Total Cholesterol	125 mg/dL	< 200
<span style="color: green;">●</span> Triglycerides	101 mg/dL	< 150
<span style="color: green;">●</span> HDL Cholesterol	50 mg/dL	40 - 80
<span style="color: green;">●</span> Non HDL Cholesterol	75 mg/dL	< 130
<span style="color: green;">●</span> LDL Cholesterol	54.8 mg/dL	< 100
<span style="color: green;">●</span> V.L.D.L Cholesterol	20.2 mg/dL	< 30
<span style="color: green;">●</span> Cho/HDL Ratio	2.5 Ratio	< 5
<span style="color: red;">●</span> HDL/ LDL Ratio	<b>0.91</b> Ratio	0.3 - 0.4
<span style="color: green;">●</span> LDL/HDL Ratio	1.1 Ratio	< 3
<span style="color: green;">●</span> HIGHLY SENSITIVE C-REACTIVE PROTEIN (hs-CRP)	< 0.40 mg/L	< 1
<span style="color: green;">●</span> Homocysteine	11.25 µmol/L	4.44 - 13.56

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### PANCREAS

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> Lipase	<b>81.3</b> U/L	13 - 60
<span style="color: red;">●</span> Amylase	<b>145</b> U/L	28 - 100

### IRON

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> Iron	<b>24</b> µg/dL	50 - 170
<span style="color: green;">●</span> TIBC,(Total Iron Binding Capacity)	410 µg/dL	250 - 450
<span style="color: red;">●</span> UIBC	<b>386</b> µg/dL	70 - 310
<span style="color: red;">●</span> Transferrin Saturation	<b>5.85</b> %	16 - 45

### AUTOIMMUNE DISORDERS

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> RHEUMATOID FACTOR, Quantitative	< 9.0 IU/mL	< 30

### VITAMIN PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Vitamin - B12	704 pg/mL	187 - 883
<span style="color: green;">●</span> Vitamin D 25 - Hydroxy	67.3 ng/mL	30 - 100

### THYROID PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> Triiodothyronine (T3)	80 ng/dL	35 - 193
<span style="color: green;">●</span> Total Thyroxine (T4)	7 µg/dL	4.87 - 11.72
<span style="color: green;">●</span> Thyroid Stimulating Hormone (Ultrasensitive)	1.8 µIU/mL	0.35 - 4.94

### HORMONES

Test Name	Result <small>unit</small>	Range
Luteinising Hormone-LH	25.8 mIU/mL	
Follicle Stimulating Hormone-FSH	73.5 mIU/mL	

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### CANCER PROFILE

Test Name	Result <small>unit</small>	Range
<span style="color: green;">●</span> CA 125 OVARIAN CANCER MARKER, SERUM	18.4 U/mL	< 35
<span style="color: green;">●</span> CEA; CARCINO EMBRYONIC ANTIGEN, SERUM	< 1.73 ng/mL	< 3
<span style="color: green;">●</span> CA 15.3 BREAST CANCER MARKER, SERUM	19.9 U/mL	< 30

### ALLERGY PANEL

Test Name	Result <small>unit</small>	Range
<span style="color: red;">●</span> IMMUNOGLOBULIN IgE TOTAL SERUM	795.8 IU/mL	< 100

### URINALYSIS

Test Name	Result <small>unit</small>	Range
Volume	20 mL	
Colour	Pale yellow	
Transparency	Clear	
<span style="color: green;">●</span> Reaction (pH)	5.5	4.5 - 8
<span style="color: green;">●</span> Specific Gravity	1.015	1.01 - 1.03
Urine Ketones (Acetone)	Negative	
Leucocyte esterase	Negative	
Nitrite	Negative	
Pus Cells (WBCs)	2-4 /hpf	
Epithelial Cells	3-5 /hpf	
Amorphous deposits	Absent	
Bacteria	Absent	

Name

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Age

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## Health Advisory

● In Range   ● Borderline (BL)   ● Out Of Range

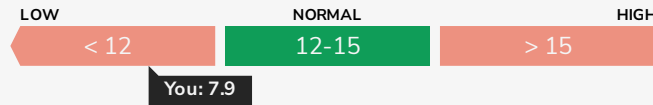


### Anemia Profile

Anemia is the condition where your body has less RBCs (red blood cells) or the RBCs don't have enough haemoglobin. Haemoglobin is the protein present in RBCs that help carry oxygen to your body's tissues.

**Hemoglobin: 7.9** g/dL

● OUT OF RANGE



### Inflammation

Inflammation is the body's immune system's response to an injury, surgery, or irritation. This natural defense process acts by removing injurious stimuli and initiating the healing process. Inflammation can be chronic (such as arthritis) or acute (like in case of trauma).

**ESR - Erythrocyte Sedimentation Rate: 47** mm/hr

● OUT OF RANGE



### Liver Profile

One of the main functions of your liver is to make proteins that are secreted in your blood. It also makes enzymes which convert food into energy, and processes old muscles and cells. When your liver is damaged, enzymes leak into your blood and appear in the blood test

**Alkaline Phosphatase: 136** U/L

● BORDERLINE

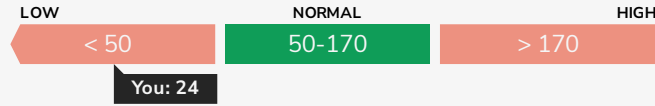


## Iron

Iron is an essential mineral that helps in the formation of hemoglobin, which carries oxygen in the blood. Iron tests are performed to evaluate iron deficiency, anemia, and conditions related to iron overload.

Iron: 24  $\mu\text{g/dL}$

● OUT OF RANGE



## Allergy Panel

Allergy is an exaggerated response of the body's immune system to natural substances (Dust, Food, Pet dander, Mold) in the environment that does not bother most other people. That can result in a lot of symptoms such as sneezing, runny nose, itching, asthma, rashes, or swelling.

IMMUNOGLOBULIN IgE TOTAL SERUM: 795.8 IU/mL

● OUT OF RANGE



Patient NAME :		Report STATUS :	
DOB/Age/Gender :		Barcode NO :	
Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			
Test Description	Value(s)	Unit(s)	Reference Range

## StayFit Platinum Full Body Checkup Package - Female

### Complete Blood Count (CBC)

RBC Parameters			
Hemoglobin <i>Cyanide free spectrophotometry</i>	7.9 L*	g/dL	12.0 - 15.0
RBC Count <i>Electrical impedance</i>	3.8	10 <sup>6</sup> /μl	3.8 - 4.8
PCV <i>Calculated</i>	25 L*	%	36 - 46
MCV <i>Calculated</i>	65.5 L*	fl	83 - 101
MCH <i>Calculated</i>	20.8 L*	pg	27 - 32
MCHC <i>Calculated</i>	31.7	g/dL	31.5 - 34.5
RDW (CV) <i>Calculated</i>	19.2 H*	%	11.6 - 14.0
RDW-SD <i>Calculated</i>	38.9	fl	35.1 - 43.9
WBC Parameters			
TLC <i>Electrical impedance and microscopy</i>	3 L*	10 <sup>3</sup> /μl	4 - 10
Differential Leucocyte Count			
Neutrophils <i>Flow-cytometry DHSS</i>	53	%	40 - 80
Lymphocytes <i>Flow-cytometry DHSS</i>	36.9	%	20 - 40
Monocytes <i>Flow-cytometry DHSS</i>	7.5	%	2 - 10
Eosinophils <i>Flow-cytometry DHSS</i>	2.3	%	1 - 6
Basophils <i>Flow-cytometry DHSS</i>	0.3	%	0 - 2
Absolute Leukocyte Counts			
Neutrophils. <i>Calculated</i>	1.59 L*	10 <sup>3</sup> /μl	2 - 7
Lymphocytes. <i>Calculated</i>	1.11	10 <sup>3</sup> /μl	1 - 3
Monocytes. <i>Calculated</i>	0.23	10 <sup>3</sup> /μl	0.2 - 1.0
Eosinophils. <i>Calculated</i>	0.07	10 <sup>3</sup> /μl	0.02 - 0.5
Basophils.	0.01 L*	10 <sup>3</sup> /μl	0.02 - 0.1

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



**Dr. Sakesh Kumar Agarwal**  
**Consultant Pathologist**  
**MBBS. DCP**

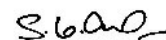
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DOB/Age/Gender :		Barcode NO :	
Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
<i>Calculated</i>			
<b>Platelet Parameters</b>			
Platelet Count <i>Electrical impedance and microscopy</i>	150	10 <sup>3</sup> /μl	150 - 410
Mean Platelet Volume (MPV) <i>Calculated</i>	<b>9.1 L*</b>	fL	9.3 - 12.1
PCT <i>Calculated</i>	0.2	%	0.17 - 0.32
PDW <i>Calculated</i>	15.4	fL	8.3 - 25.0
P-LCR <i>Calculated</i>	33.3	%	18 - 50
P-LCC <i>Calculated</i>	<b>19 L*</b>	10 <sup>9</sup> /L	44 - 140
Mentzer Index <i>Calculated</i>	17.24	%	> 13
Platelet Morphology <i>Microscopy</i>	Large platelets seen.	-	-
Comment	KINDLY CORRELATE CLINICALLY.		

**Interpretation:**

CBC provides information about red cells, white cells and platelets. Results are useful in the diagnosis of anemia, infections, leukemias, clotting disorders and many other medical conditions.

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Erythrocyte Sedimentation Rate (ESR)

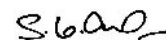
ESR - Erythrocyte Sedimentation Rate <i>MODIFIED WESTERGREN</i>	<b>47 H*</b>	mm/hr	0 - 35
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**Interpretation:**

ESR is also known as Erythrocyte Sedimentation Rate. An ESR test is used to assess inflammation in the body. Many conditions can cause an abnormal ESR, so an ESR test is typically used with other tests to diagnose and monitor different diseases. An elevated ESR may occur in inflammatory conditions including infection, rheumatoid arthritis, systemic vasculitis, anemia, multiple myeloma, etc. Low levels are typically seen in congestive heart failure, polycythemia, sickle cell anemia, hypo fibrinogenemia, etc.

**Reference-** Dacie and Lewis practical hematology

Note :- (H\* - High, L\* - Low, CL\* - Critical Low, CH\* - Critical High)



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Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### HbA1C (Glycosylated Haemoglobin)

Glycosylated Hemoglobin (HbA1c) <i>HPLC</i>	5.1	%	<5.7
Estimated Average Glucose	99.67	mg/dl	Refer Table Below

**Interpretation:**

Interpretation For HbA1c% As per American Diabetes Association (ADA)

Reference Group	HbA1c in %
Non diabetic adults >=18 years	<5.7
At risk (Prediabetes)	5.7 - 6.4
Diagnosing Diabetes	>= 6.5
Therapeutic goals for glycemc control	Age > 19 years Goal of therapy: < 7.0 Age < 19 years Goal of therapy: <7.5

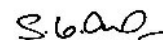
**Note:**

1. Since HbA1c reflects long term fluctuations in the blood glucose concentration, a diabetic patient who is recently under good control may still have a high concentration of HbA1c. Converse is true for a diabetic previously under good control but now poorly controlled. 2. Target goals of < 7.0 % may be beneficial in patients with short duration of diabetes, long life expectancy and no significant cardiovascular disease. In patients with significant complications of diabetes, limited life expectancy or extensive co-morbid conditions, targeting a goal of < 7.0 % may not be appropriate

**Comments :**

HbA1c provides an index of average blood glucose levels over the past 8 - 12 weeks and is a much better indicator of long term glycemc control as compared to blood and urinary glucose determinations ADA criteria for correlation between HbA1c & Mean plasma glucose levels.

HbA1c(%)	Mean Plasma Glucose (mg/dL)	HbA1c(%)	Mean Plasma Glucose (mg/dL)
6	126	12	298
8	183	14	355
10	240	16	413



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**Consultant Pathologist**  
**MBBS. DCP**

Patient NAME :		Report STATUS :	
DOB/Age/Gender :		Barcode NO :	
Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Blood Sugar Fasting

Glucose Fasting <i>Hexokinase</i>	89.4	mg/dL	70 - 100
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**Interpretation:**

Status	Fasting plasma glucose in mg/dL
Normal	70 - 100
Impaired fasting glucose	101 - 125
Diabetes	≥126

**Reference :** American Diabetes Association

**Comment :**

Blood glucose determinations are commonly used as an aid in the diagnosis and treatment of diabetes. Elevated glucose levels (hyperglycemia) may also occur with pancreatic neoplasm, hyperthyroidism, and adrenal cortical hyper function as well as other disorders. Decreased glucose levels (hypoglycemia) may result from excessive insulin therapy insulinoma, or various liver diseases.

**Note**

- 1.The diagnosis of Diabetes requires a fasting plasma glucose of > or = 126 mg/dL or a random / 2 hour plasma glucose value of > or = 200 mg/dL with symptoms of diabetes mellitus.
- 2.Very high glucose levels (>450 mg/dL in adults) may result in Diabetic Ketoacidosis.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### Liver Function Test (LFT)

Bilirubin Total <i>Diazonium Salt</i>	0.56	mg/dL	0.2 - 1.2
Bilirubin Direct <i>Diazo Reaction</i>	0.26	mg/dL	0.0 - 0.5
Bilirubin Indirect <i>Calculated</i>	0.3	mg/dL	0.1 - 1.0
SGOT/AST <i>Enzymatic [NADH (without P-5-P)]</i>	24	U/L	11 - 34
SGPT/ALT <i>Enzymatic [NADH (without P-5-P)]</i>	10.03	U/L	< 34
SGOT/SGPT Ratio <i>Calculated</i>	<b>2.39 H*</b>	Ratio	<1.00
Alkaline Phosphatase <i>Para-nitrophenyl phosphate (p-NPP)</i>	<b>136 H*</b>	U/L	46 – 122
Total Protein <i>Biuret</i>	7.8	g/dL	6.4 - 8.3
Albumin <i>Colorimetric BCG</i>	4.47	g/dL	3.2 - 4.6
Globulin <i>Calculated</i>	3.33	g/dL	2.3 - 3.5
Albumin :Globulin Ratio <i>Calculated</i>	1.34	Ratio	1.3 - 2.1
Gamma Glutamyl Transferase (GGT) <i>L-Gamma-Glutamyl-3-Carboxy-4-Nitroanalide</i>	13.29	U/L	< 38

#### Interpretation:

The liver filters blood, metabolizes nutrients, detoxifies harmful substances, and produces blood clotting proteins. Liver cells contain enzymes that facilitate these functions. When cells are damaged, enzymes leak into the blood, detectable through blood tests.

Key enzymes tested:

- AST (SGOT):** may indicate tissue injury / damage in muscles or liver.
- ALT (SGPT):** Primarily in the liver. Elevated ALT and AST suggest liver damage.
- Alkaline Phosphatase & GGT:** Linked to bile production and flow. Elevated levels may indicate bile flow issues related to the liver, gallbladder, or bile ducts.

Blood proteins, **albumin and globulin**, are essential for growth, development, and health.

- Low protein:** May indicate bleeding, liver disorders, malnutrition, or agammaglobulinemia.
- High protein (Hyperproteinemia):** Often due to dehydration or increased protein production.
- Low albumin:** Caused by poor diet, kidney, or liver disease.
- High albumin:** Usually due to severe dehydration.

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### Kidney Function Test (KFT)

Blood Urea <i>Urease</i>	24.41	mg/dL	21 - 43
Bun <i>Calculated</i>	11.41	mg/dL	8 - 23
Creatinine <i>Kinetic Alkaline Picrate</i>	1.13	mg/dL	0.5 - 1.2
eGFR (CKD-EPI)	48.26	ml/min/1.73 sq m	Normal Or High: $\geq 90$ Mild Or Decrease: 60-89 Mild To Moderate Decrease: 45-59 Mild To Severe Decrease: 30-44 Severe Decrease: 15-29 Kidney Failure: $< 15$
Bun/Creatinine Ratio <i>Calculated</i>	<b>10.1 L*</b>	Ratio	12 - 20
Urea / Creatinine Ratio <i>Calculated</i>	<b>21.6 L*</b>	Ratio	25.68- 42.8
Uric Acid <i>Uricase</i>	4.13	mg/dL	2.6 - 6.0
Calcium Serum <i>Arsenazo III</i>	9.4	mg/dL	8.4 - 10.2
Phosphorus <i>Phosphomolybdate</i>	3.4	mg/dL	2.3 - 4.7
Sodium <i>ISE-Indirect</i>	141	mmol/L	136 - 145
Potassium <i>ISE-Indirect</i>	3.5	mmol/L	3.5 - 5.1
Chloride <i>ISE-Indirect</i>	107	mmol/L	98 - 107

#### Interpretation:

Kidney function tests is a collective term for a variety of individual tests and procedures that can be done to evaluate how well the kidneys are functioning. Many conditions can affect the ability of the kidneys to carry out their vital functions. Some lead to a rapid (acute) decline in kidney function others lead to a gradual (chronic) decline in function. Both result in a buildup of toxic waste substances done on urine samples, as well as on blood samples. A number of symptoms may indicate a problem with your kidneys. These include : high blood pressure, blood in urine, frequent urges to urinate, difficulty beginning urination, painful urination, swelling in the hands and feet due to a buildup of fluids in the body. A single symptom may not mean something serious. However, when occurring simultaneously, these symptoms suggest that your kidneys are not working properly. Kidney function tests can help determine the reason. Ionized calcium this test if you have signs of kidney or parathyroid disease. The test may also be done to monitor progress and treatment of these diseases."eGFR test is applicable for patients aged 18 years or more."

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DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### Lipid Profile

Total Cholesterol <i>Enzymatic</i>	125	mg/dL	<200
Triglycerides <i>Glycerol phosphate oxidase</i>	101	mg/dL	<150
HDL Cholesterol <i>Accelerator Selective Detergent</i>	50	mg/dL	> 40
Non HDL Cholesterol <i>Calculated</i>	75	mg/dL	<130
LDL Cholesterol <i>Calculated</i>	54.8	mg/dL	<100
V.L.D.L Cholesterol <i>Calculated</i>	20.2	mg/dL	< 30
Chol/HDL Ratio <i>Calculated</i>	2.5	Ratio	0.0 - 5.0
HDL/ LDL Ratio <i>Calculated</i>	<b>0.91 H*</b>	Ratio	0.3-0.4
LDL/HDL Ratio <i>Calculated</i>	1.1	Ratio	0.0- 3.0

#### Interpretation:

Lipid level assessments must be made following 10 to 12 hours of fasting, otherwise assay results might lead to erroneous interpretation. NCEP recommends of 3 different samples to be drawn at intervals of 1 week for harmonizing biological variables that might be encountered in single assays. Intraindividual (within-person) variation in triglyceride (TG) levels is high, often showing a 12.9% to 40.8% variation in healthy individuals within 1 year,. This variability is driven by a combination of biological, lifestyle, and physiological factors that fluctuate rather than remaining constant.

#### Causes of variation include

- Diet: Levels spike 5–10 times after meals. Unhealthy high saturated fat diets like non veg diet sweetened beverages , fried or processed foods , and alcohol intake can significantly raise triglyceride values.
- Lifestyle: Obesity , sedentary lifestyle, and smoking can raise levels.
- Biology: Pregnancy (estrogen), aging, and conditions like Diabetes or Metabolic Syndrome cause major shifts.
- Drugs like : Beta-blockers, steroids, tamoxifen, thiazides, and oral contraceptives can raise triglyceride levels

National Lipid Association Recommendations (NLA-2014)	Total Cholesterol (mg/dL)	Triglyceride (mg/dL)	LDL Cholesterol (mg/dL)	Non HDL Cholesterol (mg/dL)
Optimal	<200	<150	<100	<130
Above Optimal			100-129	130 - 159
Borderline High	200-239	150-199	130-159	160 - 189
High	>=240	200-499	160-189	190 - 219
Very High	-	>=500	>=190	>=220

HDL Cholesterol	
Low	High
<40	>=60

#### Risk Stratification for ASCVD (Atherosclerotic Cardiovascular Disease) by Lipid Association of India.

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
<b>Risk Category</b>	A. CAD with > 1 feature of high risk group		
<b>Extreme risk group</b>	B. CAD with >1 feature of very high risk group of recurrent ACS (within 1 year) despite LDL-C <or = 50 mg/dl or poly vascular disease		
<b>Very High Risk</b>	1. Established ASCVD 2. Diabetes with 2 major risk factors of evidence of end organ damage 3. Familial Homozygous Hypercholesterolemia		
<b>High Risk</b>	1. Three major ASCVD risk factors 2. Diabetes with 1 major risk factor or no evidence of end organ damage 3. CHD stage 3B or 4. 4 LDL >190 mg/dl 5. Extreme of a single risk factor 6. Coronary Artery Calcium - CAC > 300 AU 7. Lipoprotein a >= 50 mg/dl 8. Non stenotic carotid plaque		
<b>Moderate Risk</b>	2 major ASCVD risk factors		
<b>Low Risk</b>	0-1 major ASCVD risk factors		
<b>Major ASCVD (Atherosclerotic cardiovascular disease) Risk Factors</b>			
1. Age >=45 years in Males & >= 55 years in Females	3. Current Cigarette smoking or tobacco use		
2. Family history of premature ASCVD	4. High blood pressure		
5. Low HDL			

**Newer treatment goals and statin initiation thresholds based on the risk categories proposed by Lipid Association of India in 2020.**

Risk Group	Treatment Goals		Consider Drug Therapy	
	LDL-C (mg/dl)	Non-HDL (mg/dl)	LDL-C (mg/dl)	Non-HDL (mg/dl)
Extreme Risk Group Category A	<50 (Optional goal <OR = 30)	<80 (Optional goal <OR = 60)	>OR = 50	>OR = 80
Extreme Risk Group Category B	>OR = 30	>OR = 60	> 30	> 60
Very High Risk	<50	<80	>OR = 50	>OR = 80
High Risk	<70	<100	>OR = 70	>OR = 100
Moderate Risk	<100	<130	>OR = 100	>OR = 130
Low Risk	<100	<130	>OR = 130*	>OR = 160

\* After an adequate non-pharmacological intervention for at least 3 months.

**References :**

- Management of Dyslipidaemia for the Prevention of Stroke : Clinical practice Recommendations from the Lipid Association of India. Current Vascular Pharmacology, 2022, 20, 134-155.
- Nordestgaard, B. A Test in Context: Lipid Profile, Fasting Versus Nonfasting. JACC. 2017 Sep, 70 (13) 1637-1646.
- P.N.M. Demacker, R.W.B. Schade, R.T.P. Jansen, A. Van &#39;t Laar, Intra-individual variation of serum cholesterol, triglycerides and high density lipoprotein cholesterol in normal humans, Atherosclerosis,
- Parhofer KG, Laufs U: The diagnosis and treatment of hypertriglyceridemia. Dtsch Arztebl Int 2019; 116: 825-32. DOI: 10.3238/arztebl.2019.0825

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**DR. WALIA MURSHIDAHUDA**  
**MBBS MD BIOCHEMISTRY**  
**CONSULTANT BIOCHEMIST**  
**DMC - 97314**

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Test Description	Value(s)	Unit(s)	Reference Range
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## Lipase

Lipase <i>Colorimetric</i>	<b>81.3 H*</b>	U/L	13 - 60
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### Interpretation:

Pancreas is the major and primary source of serum lipase though lipases are also present in liver, stomach, intestine, WBC, fat cells and milk. In acute pancreatitis, serum lipase becomes elevated at the same time as amylase and remains high for 7-10 days. Increased lipase activity rarely lasts longer than 14 days. Prolonged increase suggests poor prognosis or presence of a cyst. The combined use of serum lipase and serum amylase is effective in ruling out acute pancreatitis.

### Increased levels

Acute & Chronic pancreatitis  
Obstruction of pancreatic duct

Non pancreatic conditions like renal diseases, acute cholecystitis, intestinal obstruction, duodenal ulcer, alcoholism, diabetic ketoacidosis and following endoscopic retrograde cholangiopancreatography

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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## Amylase

Amylase <i>Enzymatic colorimetric</i>	<b>145 H*</b>	U/L	28 - 100
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### Interpretation:

1. Amylase levels are significantly increased in patients with acute pancreatitis, pancreatic duct obstruction, carcinoma pancreas, ovaries, or lungs, cholecystitis, macroamylasemia, renal disease, pancreatic pseudocyst, procedures like Endoscopic retrograde cholangiopancreatography and acute alcohol poisoning.
2. In acute pancreatitis, elevated amylase levels usually parallel lipase concentrations, although lipase levels may take a bit longer to rise than blood amylase levels and will remain elevated longer.
3. Amylase levels are raised in aspirin, diuretics, oral contraceptives, corticosteroids, indomethacin, ethyl alcohol and opiate intake

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DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Iron Studies

Iron <i>Ferene</i>	<b>24 L*</b>	µg/dL	50 - 170
TIBC,(Total Iron Binding Capacity) <i>Calculated</i>	410	µg/dL	250 – 450
UIBC <i>Ferene</i>	<b>386 H*</b>	µg/dL	70 - 310
Transferrin Saturation <i>Calculated</i>	<b>5.85 L*</b>	%	16 - 45

#### Interpretation:

Increased levels due to iron ingestion or ineffective erythropoiesis. Decreased levels due to infection, inflammation, malignancy, menstruation and Fe deficiency. Needs to be taken into consideration with TIBC. Transferrin Saturation:- Low level Transferrin Saturation can indicate iron deficiency, erythropoiesis, infection, or inflammation. High level Transferrin Saturation can indicate recent ingestion of dietary iron, ineffective erythropoiesis, haemochromatosis or liver disease. High TIBC, UIBC, or transferrin usually indicates iron deficiency, but they are also increased in pregnancy and with the use of oral contraceptives. Low TIBC, UIBC, or transferrin may occur if someone has: Hemochromatosis, Certain types of anemia due to accumulated iron, Malnutrition, kidney disease that causes a loss of protein in urine.

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### **C-Reactive Protein (CRP), Quantitative**

CRP (Quantitative) <i>Immunoturbidimetry</i>	< 1.0	mg/L	up to 5
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**Interpretation:**

**Increased CRP level:**

1. A high or increasing amount of CRP in the blood suggests the presence of inflammation but will not identify its location or the cause.
2. Suspected bacterial infection—a high CRP level can provide indication that patient has an infection.
3. Chronic inflammatory disease—high levels of CRP suggest a flare-up if you have a chronic inflammatory disease or that treatment has not been effective.

If the CRP level is initially elevated and drops, it means that the inflammation or infection is subsiding and/or responding to treatment.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
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Test Description	Value(s)	Unit(s)	Reference Range
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### High Sensitivity C-Reactive Protein (Hs-CRP)

HIGHLY SENSITIVE C-REACTIVE PROTEIN (hs-CRP) <i>Immunoturbidimetry</i>	< 0.40	mg/L	<1.00
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**Interpretation:**

Cardio CRP In mg/L	Cardiovascular Risk
<1	Low
1-3	Average
3-10	High
>10	Persistent elevation may represent Non cardiovascular inflammation

**Note:** To assess vascular risk, it is recommended to test hsCRP levels 2 or more weeks apart and calculate the average

**Comments:**

High sensitivity C Reactive Protein (hsCRP) significantly improves cardiovascular risk assessment as it is a strongest predictor of future coronary events. It reveals the risk of future Myocardial infarction and Stroke among healthy men and women, independent of traditional risk factors. It identifies patients at risk of first Myocardial infarction even with low to moderate lipid levels. The risk of recurrent cardiovascular events also correlates well with hsCRP levels. It is a powerful independent risk determinant in the prediction of incident Diabetes.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
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Test Description	Value(s)	Unit(s)	Reference Range
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### Rheumatoid Factor (RF), Quantitative

RHEUMATOID FACTOR, Quantitative <i>Immunoturbidimetry</i>	< 9.0	IU/mL	Negative <30 Weakly positive 30 to 50 Positive >50
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**Interpretation:**

Approximately 85% of patients with Rheumatoid arthritis have detectable RA. It may also be seen in other medical conditions like Sjogren's syndrome and SLE.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
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Sample Collected :			
Test Description	Value(s)	Unit(s)	Reference Range

### Vitamin B12 / Cyanocobalamin

Vitamin - B12 CMIA	704	pg/mL	187 - 883
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**Interpretation:**

Low Values are a sign of a vitamin B12 deficiency. People with this deficiency are likely to have or develop symptoms.

Causes of vitamin B12 deficiency include: Not enough vitamin B12 in diet (rare except with a strict vegetarian diet), Diseases that cause malabsorption (for example, celiac disease and Crohn's disease), Lack of intrinsic factor, Above normal heat production (for example, with hyperthyroidism), Pregnancy. Increased vitamin B12 levels are uncommon. Usually excess vitamin B12 is removed in the urine. Conditions that can increase B12 levels include: Liver disease (such as cirrhosis or hepatitis), Myeloproliferative disorders (for example, polycythemia vera and chronic myelocytic leukemia).

Vitamin B12: Low Levels can cause malabsorption, Lack of intrinsic factor, Above normal heat production (for example, with hyperthyroidism), Pregnancy. High Level Liver disease, Myeloproliferative disorders (for example, polycythemia vera and chronic myelocytic leukemia).

1. Out of 140 healthy indian population, 91% of Vitamin B 12 concentrations was at lower level: 59.00 pg/ml and upper level: 700.00 pg/ml

"Patients on Biotin supplement may have interference in some immunoassays. Ref: Arch Pathol Lab Med—Vol 141, November 2017. With individuals taking high dose Biotin (more than 5 mg per day) supplements, at least 8-hour wait time before blood draw is recommended."



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### Vitamin D 25 Hydroxy

Vitamin D 25 - Hydroxy <i>CMIA</i>	67.3	ng/mL	Deficient <20 Insufficient 21 - 29 Sufficient 30 - 100
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**Interpretation:**

25-Hydroxy vitamin D represents the main body reservoir and transport form. Mild to moderate deficiency is associated with Osteoporosis / Secondary Hyperparathyroidism while severe deficiency causes Rickets in children and Osteomalacia in adults. Prevalence of Vitamin D deficiency is approximately >50% specially in the elderly. This assay is useful for diagnosis of vitamin D deficiency and Hypervitaminosis D. It is also used for differential diagnosis of causes of Rickets & Osteomalacia and for monitoring Vitamin D replacement therapy.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Test Description	Value(s)	Unit(s)	Reference Range
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### Thyroid Profile Total

Triiodothyronine (T3) CMIA	80	ng/dL	35 - 193
Total Thyroxine (T4) CMIA	7	µg/dL	4.87 - 11.72
Thyroid Stimulating Hormone (Ultrasensitive) CMIA	1.8	µIU/mL	0.35 - 4.94

#### Interpretation:

Pregnancy	Reference Range TSH
1st Trimester	0.1 - 2.5
2nd Trimester	0.2 - 3.0
3rd Trimester	0.3 - 3.0

**Note:** TSH levels are subject to circadian variation, reaching peak levels between 2-4 am. and at a minimum between 6-10 pm. The variation is of 50 %, hence time of the day has influence on the measured serum TSH concentrations. Apart from nocturnal circadian surge other biological factors responsible for TSH variation include pulsatile secretion, along with seasonal changes and lifestyle factors such as smoking, BMI, and diet. Other contributors include aging, non-thyroidal illnesses, medication interference, and rare analytical issues like macro-TSH

#### Clinical Use:

1. Diagnose Hypothyroidism & Hyperthyroidism
2. Monitor T4 therapy
3. Measure subnormal TSH levels

**Increased TSH:** Primary hypothyroidism, Subclinical hypothyroidism, TSH-dependent hyperthyroidism, Thyroid hormone resistance

**Decreased TSH:** Graves' disease, Autonomous thyroid hormone secretion, TSH deficiency

Thyroid malfunction (hyper or hypo) affects T3 & T4 levels. Pituitary or hypothalamic issues also influence thyroid activity.

**1. Primary Hypothyroidism:** High TSH levels.

**2. Secondary/Tertiary Hypothyroidism:** Low TSH levels.

**3. Euthyroid Sick Syndrome:** Abnormal thyroid test results due to non-thyroidal illnesses (NTI).

TBG levels are stable in healthy individuals but may be altered by pregnancy, estrogens, androgens, steroids, or glucocorticoids, causing inaccurate T3 & T4 readings.

TSH	T4	T3	Interpretation
High	Normal	Normal	Mild (subclinical) hypothyroidism
High	Low	Low Or Normal	Hypothyroidism
Low	Normal	Normal	Mild (subclinical) hyperthyroidism
Low	High Or Normal	High Or Normal	Hyperthyroidism
Low	Low Or Normal	Low Or Normal	Nonthyroidal illness; pituitary (secondary) hypothyroidism
Normal	High	High	Thyroid hormone resistance syndrome (a mutation in the thyroid hormone receptor decreases thyroid hormone function)

#### References

- Van der Spoel E, Roelfsema F and van Heemst D (2021) Within-Person Variation in Serum Thyrotropin Concentrations: Main Sources, Potential Underlying Biological Mechanisms, and Clinical Implications. Front. Endocrinol. 12:619568. doi: 10.3389/fendo.2021.619568



DR. WALIA MURSHIDAHUDA  
 MBBS MD BIOCHEMISTRY  
 CONSULTANT BIOCHEMIST  
 DMC - 97314

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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Luteinizing Hormone (LH)

Luteinising Hormone-LH CMIA	25.8	mIU/mL	Follicular Phase 1.80 - 11.78 Mid-Cycle Peak 7.59 - 89.08 Luteal Phase 0.56 - 14.00 Postmenopausal Females Without HRT 5.16 - 61.99
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**Interpretation:**

**Clinical Use**

- Diagnosis of gonadal function disorders
- Diagnosis of pituitary disorders

**Increased levels**

- Primary hypogonadism
- Gonadotropin secreting pituitary tumors

**Decreased levels**

- Hypothalamic GnRH deficiency
- Pituitary LH deficiency
- Ectopic steroid hormone production
- GnRH analog treatment

### Follicle Stimulating Hormone (FSH)

Follicle Stimulating Hormone-FSH CMIA	73.5	mIU/mL	Normally Menstruating Females Follicular Phase 3.03 - 8.08 Mid-Cycle Peak 2.55 - 16.69 Luteal Phase 1.38 - 5.47 Postmenopausal Females 26.72 - 133.41
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**Interpretation:**

**Clinical Use**

- Diagnosis of gonadal function disorders
- Management and treatment of infertility in both genders

**Increased levels**

- Primary hypogonadism
- Gonadotropin secreting pituitary tumors

**Decreased levels**

- Hypothalamic GnRH deficiency
- Pituitary FSH deficiency
- Ectopic steroid hormone production



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Ca 125 (Ovarian Cancer Marker)

CA 125 OVARIAN CANCER MARKER, SERUM CMIA	18.4	U/mL	<35
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**Interpretation:**

CA 125 is a surface antigen, identified as a 200 - 1000 kDa mucin-like glycoprotein associated with non-mucinous epithelial ovarian malignancy. CA 125 is a useful tumor marker for evaluating therapy and monitoring disease status in patients under treatment for ovarian cancer. Measured serially the levels of CA 125 correspond with disease progression or regression. The rate of change in CA 125 is also highly prognostic. As a diagnostic tool however, the level of CA 125 alone is not sufficient to determine the presence or extent of disease. Levels of CA 125 should not be interpreted as absolute evidence of the presence or the absence of malignant disease. Before treatment, patients with confirmed ovarian carcinoma frequently have levels of CA 125 within the range observed in healthy regarding the histological grade or diameter of the tumor mass.

Elevated levels of CA 125 can be observed in patients with nonmalignant diseases. Patients with certain benign conditions, such as hepatic cirrhosis, acute pancreatitis, endometriosis, pelvic inflammatory disease, menstruation and first trimester pregnancy show elevated levels of CA 125. Elevated levels are also found in 1 to 2 % of healthy donors. Measurements of CA 125 should always be used in conjunction with other diagnostic procedures, including information from the patients clinical evaluation. The concentration of CA 125 in a given specimen determined with assays from different manufacturers can vary due to differences in assay methods, calibration, and reagent specificity. Values obtained with different assay methods cannot be used interchangeably. Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays. Patients routinely exposed to animal or to animal serum products can be prone to this interference and anomalous values may be observed



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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 DOB/Age/Gender : Report STATUS :  
 Patient ID / UHID : Barcode NO :  
 Referred BY : Sample Type :  
 Sample Collected : Report Date :

Test Description	Value(s)	Unit(s)	Reference Range
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## Magnesium

Magnesium,Serum Enzymatic	2.18	mg/dL	1.6 - 2.6
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### Interpretation:

Age	Ref Range in mg/dL
Newborn, 2 to 4 days	1.5 to 2.2
5 months to 6 years	1.7 to 2.3
6 to 12 years	1.7 to 2.1
12 to 20 years	1.7 to 2.2
Adult	1.6 to 2.6

Moderate or severe magnesium deficiency is usually due to losses of magnesium from gastrointestinal tract or kidneys as in vomiting and diarrhoea in former and alcohol, diabetes mellitus (osmotic diuresis), loop diuretics(furosemide) and aminoglycoside antibiotics in latter. Symptomatic hypermagnesemia is almost always caused by excessive intake with concomitant renal failure, thereby decreasing the ability of the kidneys to excrete excess magnesium.

## Carcinoembryonic Antigen (CEA)

CEA; CARCINO EMBRYONIC ANTIGEN, SERUM CMIA	< 1.73	ng/mL	<3.0
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### Interpretation:

REFERENCE GROUP	REFERENCE RANGE IN ng/mL
Non Smokers	<3.0
Smokers	<5.0

### Note :

1. This test is not recommended for cancer screening in the general population.
2. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.
3. Patients with confirmed carcinoma may show normal pre-treatment CEA levels. Hence this assay, regardless of level, should not be interpreted as absolute evidence for presence or absence of malignant disease. The assay value should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.
4. Persistently elevated CEA levels are usually indicative of progressive malignant disease and poor therapeutic response.

### Clinical Use

1. Monitoring patients with Colorectal, Gastrointestinal, Lung & Breast carcinoma
2. Diagnosis of occult metastatic disease and / or residual disease



DR. WALIA MURSHIDAHUDA  
 MBBS MD BIOCHEMISTRY  
 CONSULTANT BIOCHEMIST  
 DMC - 97314

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Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			
Test Description	Value(s)	Unit(s)	Reference Range

### CA 15.3 (Breast Cancer Marker)

CA 15.3 BREAST CANCER MARKER, SERUM CMIA	19.9	U/mL	<31.3 U/mL
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**Interpretation:**

**Note :**

1. This test is not recommended to screen Breast cancer in the general population.
2. False negative/positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.
3. Patients with confirmed Breast cancer may show normal pre-treatment CA 15.3 levels. Hence this assay, regardless of level, should not be interpreted as absolute evidence for the presence or absence of malignant disease. The assay value should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.

**Clinical Use :**

1. An aid in the management of Breast cancer patients. It Is useful in monitoring therapy and progression in Metastatic Breast cancer patients. A significant increase in levels must be at least 25% that correlates with disease progression in 90% of the patients. A decrease of at least 25% in levels correlates with regression of the disease in 78% of patients
2. Predict recurrence in patients with stage II / III Breast carcinoma



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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### Immunoglobulin IgE (IgE Total), Serum

IMMUNOGLOBULIN IgE TOTAL SERUM <i>Immunoturbidimetric</i>	<b>795.8 H*</b>	IU/mL	<100
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**Interpretation:**

The level of serum IgE rises during childhood and reaches adult levels during the teens. IgE is the mediator of the allergic response. Patients with atopic disease, including allergic asthma, allergic rhinitis, and atopic dermatitis commonly have moderately elevated serum IgE levels. Total serum IgE levels may also be elevated in the presence of some clinical conditions that are not related to allergy. These clinical conditions include parasitic infections, immunodeficiency states, autoimmune diseases, Hodgkins disease, bronchopulmonary aspergillosis, IgE myeloma, and Sezary syndrome.

Note :- (H\* - High , L\* - Low ,CL\* - Critical Low,CH\* - Critical High)



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Patient ID / UHID :		Sample Type :	
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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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## Homocysteine

Homocysteine CMA	11.25	µmol/L	4.44 - 13.56
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### Interpretation:

Homocysteine is a sulphur containing amino acid. There is an association between elevated levels of circulating homocysteine and various vascular and cardiovascular disorders. Clinically the measurement of homocysteine is considered important to diagnose homocystinuria, to identify individuals with or at risk of developing cobalamin or folate deficiency & to assess risk factor for Cardiovascular Disease (CVD) for which the recommendations are:

1. Specially useful in young CVD patients (< 40 yrs.)
2. In known cases of CVD, high homocysteine levels should be used as a prognostic marker for CVD events and mortality
3. CVD patients with homocysteine levels >15 µmol/L belong to a high risk group?

Increased homocysteine levels with low vitamin concentrations should be handled as a potential vitamin deficiency case.



DR. WALIA MURSHIDAHUDA  
MBBS MD BIOCHEMISTRY  
CONSULTANT BIOCHEMIST  
DMC - 97314

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Patient ID / UHID :		Sample Type :	
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Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
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## Urine Routine and Microscopic Examination

Physical Examination			
Volume	20	mL	-
Colour	Pale yellow	-	Pale yellow
Transparency	Clear	-	Clear
Deposit	Absent	-	Absent

Chemical Examination			
Reaction (pH) <i>Double Indicator</i>	5.5	-	4.5 - 8.0
Specific Gravity <i>Ion Exchange</i>	1.015	-	1.010 - 1.030
Urine Glucose (sugar) <i>Oxidase / Peroxidase</i>	Negative	-	Negative
Urine Protein (Albumin) <i>Acid / Base Colour Exchange</i>	Negative	-	Negative
Urine Ketones (Acetone) <i>Legals Test</i>	Negative	-	Negative
Blood <i>Peroxidase Hemoglobin</i>	Negative	-	Negative
Leucocyte esterase <i>Enzymatic Reaction</i>	Negative	-	Negative
Bilirubin Urine <i>Coupling Reaction</i>	Negative	-	Negative
Nitrite <i>Griless Test</i>	Negative	-	Negative
Urobilinogen <i>Ehrlichs Test</i>	Normal	-	Normal

Microscopic Examination			
Pus Cells (WBCs)	2-4	/hpf	0 - 5
Epithelial Cells	3-5	/hpf	0 - 4
Red blood Cells	Absent	/hpf	0 - 2
Crystals	Absent	-	Absent
Cast	Absent	-	Absent
Yeast Cells	Absent	-	Absent
Amorphous deposits	Absent	-	Absent
Bacteria	Absent	-	Absent
Protozoa	Absent	-	Absent

### Interpretation:

**URINALYSIS-** Routine urine analysis assists in screening and diagnosis of various metabolic, urological, kidney and liver disorders.

**Protein:** Elevated proteins can be an early sign of kidney disease. Urinary protein excretion can also be temporarily elevated by strenuous exercise, orthostatic proteinuria, dehydration, urinary tract infections and acute illness with fever

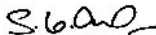


**Dr. Sakesh Kumar Agarwal**  
**Consultant Pathologist**  
**MBBS. DCP**

Patient NAME :		Report STATUS :	
DOB/Age/Gender :		Barcode NO :	
Patient ID / UHID :		Sample Type :	
Referred BY :		Report Date :	
Sample Collected :			

Test Description	Value(s)	Unit(s)	Reference Range
<p><b>Glucose:</b> Uncontrolled diabetes mellitus can lead to presence of glucose in urine. Other causes include pregnancy, hormonal disturbances, liver disease and certain medications.</p>			
<p><b>Ketones:</b> Uncontrolled diabetes mellitus can lead to presence of ketones in urine. Ketones can also be seen in starvation, frequent vomiting, pregnancy and strenuous exercise.</p>			
<p><b>Blood:</b> Occult blood can occur in urine as intact erythrocytes or haemoglobin, which can occur in various urological, nephrological and bleeding disorders.</p>			
<p><b>Leukocytes:</b> An increase in leukocytes is an indication of inflammation in urinary tract or kidneys. Most common cause is bacterial urinary tract infection.</p>			
<p><b>Nitrite:</b> Many bacteria give positive results when their number is high. Nitrite concentration during infection increases with length of time the urine specimen is retained in bladder prior to collection.</p>			
<p><b>pH:</b> The kidneys play an important role in maintaining acid base balance of the body. Conditions of the body producing acidosis/ alkalosis or ingestion of certain type of food can affect the pH of urine.</p>			
<p><b>Specific gravity:</b> Specific gravity gives an indication of how concentrated the urine is. Increased specific gravity is seen in conditions like dehydration, glycosuria and proteinuria while decreased specific gravity is seen in excessive fluid intake, renal failure and diabetes insipidus.</p>			
<p><b>Bilirubin:</b> In certain liver diseases such as biliary obstruction or hepatitis, bilirubin gets excreted in urine.</p>			
<p><b>Urobilinogen:</b> Positive results are seen in liver diseases like hepatitis and cirrhosis and in cases of haemolytic anaemia.</p>			

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



**Dr. Sakesh Kumar Agarwal**  
**Consultant Pathologist**  
**MBBS. DCP**

**Patient Data**

Sample ID:  
 Patient ID:  
 Name:  
 Physician:  
 Sex:  
 DOB:

**Analysis Data**

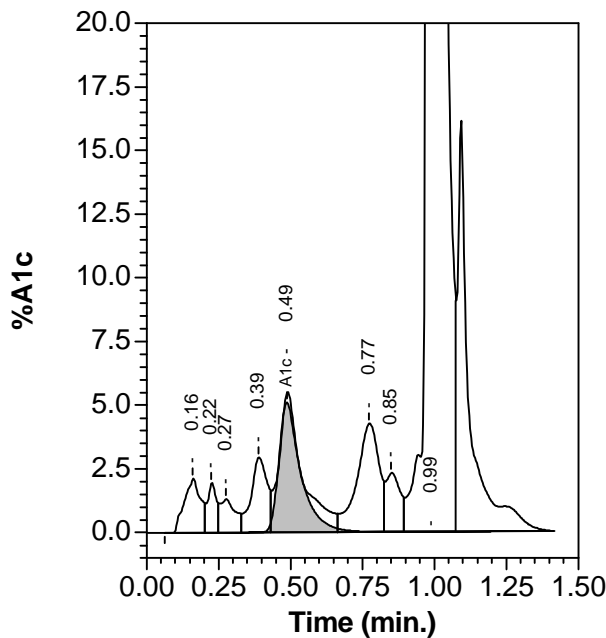
Analysis Performed:  
 Injection Number:  
 Run Number:  
 Rack ID:  
 Tube Number:  
 Report Generated:  
 Operator ID:

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.3	0.158	23571
A1b	---	0.6	0.222	11374
F	---	0.7	0.274	13634
LA1c	---	1.7	0.388	31153
A1c	5.1	---	0.486	75794
P3	---	3.5	0.772	63597
P4	---	1.2	0.848	21885
Ao	---	86.9	0.989	1596381

Total Area: 1,837,388

**HbA1c (NGSP) = 5.1 %**



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