

**Client**  
**Gurugram**  
Pathkind Diagnostics Pvt. Ltd.  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

**Processed By**  
**Pathkind Diagnostics Pvt. Ltd.**  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

<b>Name</b>	: Mr. PL218	<b>Billing Date</b>	: 07/07/2023 12:30:52
<b>Age</b>	: 35 Yrs	<b>Sample Collected on</b>	: 10/07/2023 10:01:31
<b>Sex</b>	: Male	<b>Sample Received on</b>	: 10/07/2023 11:02:13
<b>P. ID No.</b>	: P1000100012912	<b>Report Released on</b>	: 20/07/2023 20:36:31
<b>Accession No</b>	: 10002304968	<b>Barcode No.</b>	: 10002304968-01
<b>Referring Doctor</b>	: Self		
<b>Referred By</b>	:	<b>Ref no.</b>	:

#### Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
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#### HAEMATOLOGY

#### HEALTHKIND ACTIVE

##### Complete Blood Count (CBC)

<b>Haemoglobin (Hb)</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Photometric measurement</i>	13.2	13.0 - 17.0	gm/dL
<b>Total WBC Count / TLC</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Impedance</i>	7.2	4.0 - 10.0	thou/ $\mu$ L
<b>RBC Count</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Impedance</i>	4.2 L	4.5 - 5.5	million/ $\mu$ L
<b>PCV / Hematocrit</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Impedance</i>	41.2	40.0 - 50.0	%
<b>MCV</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	83.0	83.0 - 101.0	fL
<b>MCH</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	27.0	27.0 - 32.0	pg
<b>MCHC</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	31.5	31.5 - 34.5	g/dL
<b>RDW (Red Cell Distribution Width)</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	14.2	11.8 - 15.6	%

##### DLC (Differential Leucocyte Count)

*Method: Flowcytometry/Microscopy*

<b>Neutrophils</b> <i>Sample: Whole Blood EDTA</i> <i>Method: VCS Technology &amp; Microscopy</i>	70	40 - 80	%
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<b>Lymphocytes</b> <i>Sample: Whole Blood EDTA</i> <i>Method: VCS Technology &amp; Microscopy</i>	20	20 - 40	%
<b>Eosinophils</b> <i>Sample: Whole Blood EDTA</i> <i>Method: VCS Technology &amp; Microscopy</i>	02	01 - 06	%
<b>Monocytes</b> <i>Sample: Whole Blood EDTA</i> <i>Method: VCS Technology &amp; Microscopy</i>	08	02 - 10	%
<b>Basophils</b> <i>Sample: Whole Blood EDTA</i> <i>Method: VCS Technology &amp; Microscopy</i>	00	00 - 02	%
<b>Absolute Neutrophil Count</b> <i>Sample: Whole Blood EDTA</i>	5040	2000 - 7000	/μL
<b>Absolute Lymphocyte Count</b> <i>Sample: Whole Blood EDTA</i>	1440	1000 - 3000	/μL
<b>Absolute Eosinophil Count</b> <i>Sample: Whole Blood EDTA</i>	144	20 - 500	/μL
<b>Absolute Monocyte Count</b> <i>Sample: Whole Blood EDTA</i>	576	200 - 1000	/μL
<b>Absolute Basophil Count</b> <i>Sample: Whole Blood EDTA</i>	00 L	20 - 100	/μL
<b>Platelet Count</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Impedance</i>	252	150 - 410	thou/μL
<b>MPV (Mean Platelet Volume)</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	11.2 H	6.8 - 10.9	fL
<b>Fasting Plasma Glucose</b> <i>Sample: Fluoride Plasma - F</i> <i>Method: Hexokinase</i>	81	74 - 99	mg/dL

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<b>Glucose Random</b> <i>Sample: Fluoride Plasma - R</i> <i>Method: Hexokinase</i>	130	70 - 140	mg/dL
<b>HbA1C (Glycosylated Hemoglobin)</b>			
<b>HbA1c</b> <i>Sample: Whole Blood EDTA</i> <i>Method: High Performance Liquid Chromatography (HPLC)</i>	6.5 H	Non Diabetic : < 5.7 % Prediabetic Range : 5.7 - 6.4 % Diabetic Range : >= 6.5 % Goal of Therapy : <7.0 % Action suggested : >8.0 %	%
<b>Mean Plasma Glucose</b> <i>Sample: Whole Blood EDTA</i> <i>Method: Calculated</i>	139.9 H	<116.0	mg/dL
<b>Lipid Profile</b>			
<b>Total Cholesterol</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Esterase/CO/Peroxidase</i>	156	Desirable Level : < 200 Borderline : 200 - 239 High Risk : >= 240	mg/dL
<b>Triglycerides</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Enzymatic</i>	100	Desirable : < 150 Borderline High : 150 - 199 High : 200 - 499 Very High : >= 500	mg/dL
<b>LDL Cholesterol (Calculated)</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	32	Optimal : <100 Near Optimal : 100 - 129 Borderline High : 130 - 160 High : 161 - 189 Very High : >=190	mg/dL
<b>HDL Cholesterol</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Esterase/CO/Peroxidase</i>	56	Low : < 40 Optimal : 40 - 60 High : > 60	mg/dL
<b>Non HDL Cholesterol</b> <i>Sample: Serum</i>	100	< 130	mg/dL
<b>VLDL Cholesterol</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	20.0	Desirable 10 - 35	mg/dL

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<b>Referring Doctor</b>	: Self	<b>Ref no.</b>	: 10002304968-04
<b>Referred By</b>	:		

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Test Name	Result	Biological Ref. Interval	Unit
<b>Total Cholesterol / HDL Ratio</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	2.79 L	Low Risk : 3.3 - 4.4 Average Risk : 4.5 - 7.0 Moderate Risk : 7.1 - 11.0 High Risk : > 11.0	
<b>LDL / HDL Ratio</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	0.6	0.5 - 3.0  Low Risk : 0.5 - 3.0 Moderate Risk : 3.1 - 6.0 High Risk : > 6.0	



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Test Name	Result	Biological Ref. Interval	Unit
<b>Liver Function Test (LFT)</b>			
<b>Bilirubin Total</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Diazo</i>	1.2	0.0 - 1.2	mg/dL
<b>Bilirubin Direct</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Diazo</i>	0.6 H	0.0 - 0.2	mg/dL
<b>Serum Bilirubin (Indirect)</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	0.60	0.00 - 0.90	mg/dL
<b>SGOT / AST</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-IFCC Without Pyridoxal PO4</i>	35 H	0 - 33	U/L
<b>SGPT / ALT</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-IFCC Without Pyridoxal PO4</i>	30	0 - 41	U/L
<b>AST / ALT Ratio</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	1.17		
<b>Alkaline Phosphatase (ALP)</b> <i>Sample: Serum</i> <i>Method: IFCC</i>	66	40 - 129	U/L
<b>Total Protein</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry Biuret</i>	6.6	6.4 - 8.3	g/dL
<b>Albumin</b> <i>Sample: Serum</i> <i>Method: Spectrophotometry-Bromocresol Purple</i>	4.2	3.5 - 4.8	g/dL
<b>Globulin</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	2.4	1.9 - 3.7	g/dL
<b>Albumin/Globulin (A/G) Ratio</b> <i>Sample: Serum</i> <i>Method: Calculated</i>	1.8	1.0 - 2.1	g/dL

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Test Name	Result	Biological Ref. Interval	Unit
<b>Gamma-Glutamyl Transferase (GGT)</b> Sample: Serum Method: Spectrophotometry-GGCNA	65	0 - 71	U/L
<b>Kidney Function Test</b>			
<b>Blood Urea Nitrogen (BUN)</b> Sample: Serum Method: Spectrophotometry-Urease / GLDH	15.00	8.87 - 20.50	mg/dL
<b>Urea</b> Sample: Serum Method: Calculated	32.10	19.00 - 44.00	mg/dL
<b>Creatinine</b> Sample: Serum Method: Spectrophotometry Alkaline Picrate	1.02	0.70 - 1.30	mg/dL
<b>BUN Creatinine Ratio</b> Sample: Serum Method: Calculated	15	10 - 20	
<b>Uric Acid</b> Sample: Serum Method: Uricase-Peroxidase	6.5	3.6 - 8.2	mg/dL
<b>Sodium</b> Sample: Serum Method: ISE	136	136 - 145	mmol/L
<b>Potassium</b> Sample: Serum Method: ISE	4.7	3.5 - 5.1	mmol/L
<b>Chloride</b> Sample: Serum Method: ISE	106	97 - 107	mmol/L
<b>Calcium</b> Sample: Serum Method: Spectrophotometry - OCC	9.6	8.6 - 10.0	mg/dL
<b>Phosphorus</b> Sample: Serum Method: Spectrophotometry-Phosphomolybdate Reduction	4.6 H	2.6 - 4.5	mg/dL

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<b>Thyroid Profile Total</b>			
<b>Total T3 (Triiodothyronine)</b> <i>Sample: Serum</i> <i>Method: ECLIA</i>	2.30 H	0.80 - 2.00	ng/mL
<b>Total T4 (Thyroxine)</b> <i>Sample: Serum</i> <i>Method: ECLIA</i>	10.65	5.10 - 14.10	µg/dL
<b>TSH 3rd Generation</b> <i>Sample: Serum</i> <i>Method: ECLIA</i>	4.200	0.270 - 4.200	µIU/mL

#### Complete Blood Count (CBC)

##### Clinical Significance :

CBC comprises of estimation of the cellular components of blood including RBCs, WBCs and Platelets. Mean corpuscular volume (MCV) is a measure of the size of the average RBC, MCH is a measure of the hemoglobin content of the average RBC and MCHC is the hemoglobin concentration per RBC. The red cell distribution width (RDW) is a measure of the degree of variation in RBC size (anisocytosis) and is helpful in distinguishing between some anemias. CBC examination is used as a screening tool to confirm a hematologic disorder, to establish or rule out a diagnosis, to detect an unsuspected hematologic disorder, or to monitor effects of radiation or chemotherapy. Abnormal results may be due to a primary disorder of the cell-producing organs or an underlying disease. Results should be interpreted in conjunction with the patient's clinical picture and appropriate additional testing performed.

#### HbA1C (Glycosylated Hemoglobin)

##### Clinical Significance :

Hemoglobin A1c (HbA1c) level reflects the mean glucose concentration over the previous period (approximately 8-12 weeks) and provides a much better indication of long-term glycemic control than blood and urinary glucose determinations. American Diabetes Association (ADA) include the use of HbA1c to diagnose diabetes, using a cutpoint of 6.5%. The ADA recommends measurement of HbA1c 3-4 times per year for type 1 and poorly controlled type 2 diabetic patients, and 2 times per year for well-controlled type 2 diabetic patients) to assess whether a patient's metabolic control has remained continuously within the target range. Falsely low HbA1c results may be seen in conditions that shorten erythrocyte life span. and may



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not reflect glycemetic control in these cases accurately.

**Lipid Profile**
**Proposed LDL-C goals in very high risk and extreme risk group patients by the Lipid Association of India.**

Very High Risk group(VHRG)	Extreme Risk group	
	Category A	Category B
LDL-C goal of <50 mg/dl  High-risk conditions Any one of following:  1. ASCVD (CAD/PAD/TIA or stroke) 2. Homozygous familial 3. hypercholesterolemia 4. Diabetes with ≥2 major ASCVD risk factors*/target organ damage	LDL-C goal of <50 mg/dl (recommended) LDL-C goal of ≤30 mg/dl (optional)  CAD with ≥1 of following:  1. Diabetes without target organ damage/≤1 major 2. ASCVD risk factors 3. Familial hypercholesterolemia 4. ≥3 major ASCVD risk factors 5. CKD stage 3B and 4 6. ≥2 major ASCVD risk factors with ≥1 moderate 7. non-conventional risk factor# 8. Lp(a) ≥50 mg/dl 9. Coronary calcium score ≥300 HU 10. Extreme of a single risk factor 11. PAD 12. H/o TIA or stroke 13. Non-stenotic carotid plaque	LDL-C goal of ≤30 mg/dl  CAD with ≥1 of following:  1. Diabetes + polyvascular disease/≥2 2. major ASCVD risk factors*/target organ 3. damage 4. Recurrent ACS (within 12 months) 5. despite on LDL-C goal 6. Homozygous familial 7. Hypercholesterolemia



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The LDL-C goal of  $\leq 30$  mg/dl must be pursued after detailed risk-benefit discussion between physician and patient.

Clinical judgment to be used in decision making if the patient has disease/risk factors not covered in the table, eg. peripheral arterial disease or cerebrovascular disease.

\*Major ASCVD risk factors: 1. Age- male  $\geq 45$  years, female  $\geq 55$  years, 2. Family h/o premature CAD- male  $< 55$  years, female  $< 65$  years, 3. Smoking/tobacco use, 4. Systemic hypertension, 5. Low HDL (males  $< 40$  mg/dl and females  $< 50$  mg/dl).

#Moderate non-conventional risk factors: 1. Coronary calcium score 100–299 HU, 2. Increased carotid intima-media thickness, 3. Lp(a)  $\geq 20$ –49

## Uric Acid

### Clinical Significance :

Uric acid is the final product of purine metabolism. Serum uric acid levels are raised in case of increased purine synthesis, inherited metabolic disorder, excess dietary purine intake, increased nucleic acid turnover, malignancy and cytotoxic drugs. Decreased levels are seen in chronic renal failure, severe hepatocellular disease with reduced purine synthesis, defective renal tubular reabsorption, overtreatment of hyperuricemia with allopurinol, as well as some cancer therapies.

## Total T3 (Triiodothyronine)

### Clinical Significance :

Thyroid hormones, T3 and T4, which are secreted by the thyroid gland, regulate a number of developmental, metabolic, and neural activities throughout the body. The thyroid gland synthesizes 2 hormones - T3 and T4. T3 production in the thyroid gland constitutes approximately 20% of the total circulating T3, 80% being produced by peripheral conversion from T4. T3 is more potent biologically. Total T3 comprises of Free T3 and bound T3. Bound T3 remains bound to carrier proteins like thyroid-binding globulin, prealbumin, and albumin. Only the free forms are metabolically active. In hyperthyroidism, both T4 and T3 levels are usually elevated, but in some rare cases, only T3 elevation is also seen. In hypothyroidism T4 and T3 levels are both low. T3 levels are frequently low in sick or hospitalized euthyroid patients.

## Total T4 (Thyroxine)

### Clinical Significance :

Total T4 is synthesized in the thyroid gland. About 0.05% of circulating T4 is in the free or biologically active form. The remainder is bound to thyroxine-binding globulin (TBG), prealbumin, and albumin. High levels of T4 (and FT4) causes hyperthyroidism and low levels lead to hypothyroidism.

## TSH 3rd Generation



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**Clinical Significance :**

TSH levels are elevated in primary hypothyroidism and low in primary hyperthyroidism. Evaluation of TSH is useful in the differential diagnosis of primary from secondary and tertiary hypothyroidism. In primary hypothyroidism, TSH levels are elevated, while secondary and tertiary hypothyroidism, TSH levels are low or normal. High TSH level in the presence of normal FT4 is subclinical hypothyroidism and low TSH with normal FT4 is called subclinical hyperthyroidism. Sick, hospitalized patients may have falsely low or transiently elevated TSH. Significant diurnal variation is also seen in TSH levels.

Guidelines for TSH levels in pregnancy, as per American Thyroid Association, are as follows:

PREGNANCY TRIMESTER	BIOLOGICAL REFERENCE INTERVAL	UNIT
FIRST TRIMESTER	0.100 - 2.500	µIU/mL
SECOND TRIMESTER	0.200 - 3.000	µIU/mL
THIRD TRIMESTER	0.300 - 3.000	µIU/mL

\*\* End of Report \*\*



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