

**Patient Name :** Demo Patient Name  
**Age / Sex :** 20 Y / F  
**Referred By :** DEMO HOSPITAL  
**Centre :** HOD Head Office

**Lab No :** Demo Visit No  
**Registration On :** 20-Jan-25 14:57  
**Patient ID :** UHID.DEMO.001

## ESR

## EDTA Whole Blood Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 20:15

Observation	Result	Unit	Biological Ref. Interval	Method
ESR	27	mm/hr	<20	Modified Westergren

**Clinical Notes for ESR:****Increased ESR is seen in:**

- In any chronic infection
- Active rheumatic fever
- Acute myocardial infection
- Nephrosis
- All type of shocks

**Decreased ESR is seen in:**

- Newborn infants
- Polycythemia
- Congestive heart failure
- Sickel cell anaemia

**Remarks:** Please correlate results with clinical conditions.



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## Peripheral Smear

EDTA Whole Blood Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 19:59

## Peripheral Smear Examination

**RBC Series:** Normocytic Normochromic.

**WBC Series:** Normal in number, morphology and distribution

**Platelets Series:** Adequate on smear and normal in morphology.

**Parasite:** No Haemoparasite seen.

**Impression:** Normocytic normochromic blood picture

**Advise:** Please Correlate Clinically

## MP

EDTA Whole Blood Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 20:50

Observation	Result	Unit	Biological Ref. Interval	Method
Malaria Parasite	NOT SEEN			Microscopy

**Remarks:** Please correlate results with clinical conditions.



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Liver Function Test				Serum Sample
Accession No: DEMO_BARCODE		Collected On: 20-Jan-25 14:57	Received On: 20-Jan-25 19:28	Approved On: 20-Jan-25 19:48
Observation	Result	Unit	Biological Ref. Interval	Method
Total Protein	7.1	g/dL	6.5-8.3	Biuret, No Serum Blank
Albumin	4.3	g/dL	3.9 - 5.0	Bromocresol Green
Globulin	2.8	gm/dL	2.0-3.5	Calculated
A/G Ratio	1.54	Ratio	1.5-2.5	Calculated
Total Bilirubin	0.46	mg/dL	0.2-1.3	Azobilirubin/dyphylline
Conjugated Bilirubin	0.25	mg/dL	<0.3	Calculated
Unconjugated Bilirubin	0.21	mg/dL	<1.1	Spectrophotometry
SGOT (AST)	27	U/L	18-34	Enzymatic Colorimetric
SGPT (ALT)	22	U/L	4-35	UV with P5P
SGOT/SGPT Ratio	1.23	Ratio		Calculated
Alkaline Phosphatase	89	U/L	44 - 107	PNPP, AMP buffer
Gamma Glutamyl Transferase	18	U/L	12 - 38	G-glutamyl-p-nitroanilide

**Clinical Significance of LFT:** The clinical suspicion of liver disease usually leads to the measurement of the liver function tests (LFT) which include measurement of several enzymes, serum bilirubin and albumin. These parameters may point to an underlying pathological process and direct further investigation. The aim of investigation in patients with suspected liver disease are: ·To detect hepatic abnormality · Measurement of severity of liver damage · Identify the specific cause · Investigate possible complications

**Technology: Dry Chemistry** (VITROS MicroSlide, MicroSensor and Intellicheck Technology)  
**Analyzer:** Fully Automated Biochemistry and ImmunoAssay Analyzer: VITROS 5600

**Advise:** Please correlate results clinically.



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## C-Reactive Protein

Serum Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 21:14

Observation	Result	Unit	Biological Ref. Interval	Method
Crp [Quantitative]	54.5	mg/L	<5.0	Immunoturbidimetric

### Clinical Significance of CRP:

C-reactive protein (CRP) is a serum protein, which is synthesized in the liver. Its rate of synthesis and secretion increases within hours of an acute injury or the onset of inflammation and may reach as high as 20 times the normal levels. Elevated serum concentration of CRP indicates active tissue damage process and CRP measurement thus provides a simple screening test for organic disorders. Clinical Significance of CRP stands important for

- Inflammatory disorders
- Management of neonatal septicaemia and meningitis
- Postoperative surveillance
- Myocardial infarction
- CRP is found to be present after the first trimester of pregnancy and persists until delivery.
- CRP levels increase in women who are on oral contraceptives.
- CRP response is not affected by the commonly used anti-inflammatory or immunosuppressive drugs, including steroids, unless the disease activity is affected.

### Advise for CRP:

Since CRP production is a non-specific response to tissue injury, it is recommended that results of the test should be correlated with clinical findings to arrive at the final diagnosis. In cases where an increase in CRP levels is suspected, but the screening tests shows negative results, semiquantitation should be done to rule out prozone effect.

**Sample Type:** Serum

**Technology:** VITROS MicroTip, MicroSensor & Intellicheck

**Analyzer:** Fully Automated Biochemistry and Immunology Analyzer : VITROS 5600

**Advise:** Please correlate results with clinical conditions



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## CBC EDTA Whole Blood Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 19:39

Observation	Result	Unit	Biological Ref. Interval	Method
Hemoglobin	11.9	gm/dL	12.0 - 15.0	Photometric Measurement
Total RBC	4.24	million/ $\mu$ L	3.8 - 4.8	Coulter Principle
Platelet Count	293	$\times 10^3 / \mu$ L	150 - 410 $\times 10^3 / \mu$ L	Impedance
Total Leucocyte Count (WBC)	8.79	$\times 10^3 / \mu$ L	4.0 - 10.0	Flow Cytometry
<b>Differential Leucocyte Count (DLC)</b>				
Neutrophils	74	%	40 - 80	Flow Cytometry
Lymphocytes	15.0	%	20 - 40	Flow Cytometry
Monocytes	9.8	%	2 - 10	Flow Cytometry
Eosinophils	1.0	%	1 - 6	Flow Cytometry
Basophils	0.2	%	0 - 1	Flow Cytometry
Absolute Neutrophil Count	6.5	$\times 10^3 / \mu$ L	2.0 - 7.5	Flow Cytometry
Absolute Lymphocyte Count	1.32	$\times 10^3 / \mu$ L	1.0 - 4.0	Flow Cytometry
Absolute Monocyte Count	0.86	$\times 10^3 / \mu$ L	0.2 - 1.0	Flow Cytometry
Absolute Eosinophil Count	0.09	$\times 10^3 / \mu$ L	0.04 - 0.44	Flow Cytometry
Absolute Basophil Count	0.03	$\times 10^3 / \mu$ L	0.00 - 0.30	Flow Cytometry
<b>Indices</b>				
Hematocrit (PCV)	38.4	%	36 - 46	Calculated
Mean Corpuscular Volume (MCV)	90.7	fL	83 - 101	Calculated
Mean Corp. Hemoglobin (MCH)	28.1	pg	27 - 32	Calculated
MCH Concentration (MCHC)	31.0	g/dl	31.5 - 34.5	Calculated
Red Cell Dist. Width (RDW-CV)	13.0	%	11.5 - 14.5	Calculated
Red Cell Dist. Width (RDW-SD)	43.2	fL	39 - 46	Calculated
Mean Platelet Volume (MPV)	11.8	fL	7.5 - 12.0	Calculated
P-LCC	111	$10^9/L$	30-90	SF Cube
P-LCR	37.88	%	11-45	Calculated
Neutrophil-Lymphocyte Ratio (NLR)	4.93	Ratio		Calculated
Mentzer Index	21.39	Index		Calculated

**Remarks:** Please correlate with clinical conditions

## Widal Serum Sample

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 20:49

Observation	Result	Unit	Biological Ref. Interval	Method
Salmonella Typhi O	1:40			Slide semi-Quantitative
Salmonella Typhi H	1:40			Slide semi-Quantitative
S.Paratyphi A H	1:20			Slide semi-Quantitative
S.Paratyphi B H	1:20			Slide semi-Quantitative



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#### Clinical Significance:

The Widal test is used to make a presumptive diagnosis of enteric fever or typhoid fever. This method relies on a reaction in a test-tube or on a slide between antibodies present in the infected persons blood sample and specific antigens of Salmonella typhi (H and O), which produces visible clumping or agglutination.  
 - Antibody titres of 1:80 or more are considered diagnostically significant. However, the significant titre may vary from between populations and needs to be established for each area.  
 - H agglutination is more reliable than O agglutinin.  
 - Agglutinin starts appearing in serum by the end of 1st week with sharp rise in 2nd and 3rd week and the titre remains steady till 4th week after which it declines.

#### Limitations:

- The Widal test may be falsely positive in patients who have had previous vaccination or infection with S. Typhi.  
 - Besides cross-reactivity with other Salmonella species, the test cannot distinguish between a current infection and a previous infection or vaccination against typhoid.  
 - False positive Widal test results are also known to occur in typhus, acute falciparum malaria (particularly in children), chronic liver disease associated with raised globulin levels and disorders such as rheumatoid arthritis, myelomatosis and nephrotic syndrome.  
 - False negative results may be associated with early treatment, with hidden organisms in bone and joints, and with relapses of typhoid fever. Occasionally, false negative results may also be due to the infecting strains being poorly immunogenic, antibody responses being blocked by early antimicrobial treatment or following a typhoid relapse.

Please correlate results with clinical condition.

Dengue NS1				Serum Sample
<b>Accession No:</b> DEMO_BARCODE	<b>Collected On:</b> 20-Jan-25 14:57	<b>Received On:</b> 20-Jan-25 19:28	<b>Approved On:</b> 20-Jan-25 20:31	
Observation	Result	Unit	Biological Ref. Interval	Method
Dengue NS1 Antigen	Negative			

#### Interpretation:

Interpretation	Remarks
Negative	No detectable Dengue NS1. The result does not rule out dengue infection. An additional sample for IgG and IgM should be tested after 7-14 days.
Equivocal	Repeat Sample after 1 Week
Positive	Presence of detectable NS1 Antigen. Dengue IgG and IgM Assay Should Be Performed after 5-7 days of onset of fever, to confirm dengue infection

**Clinical Advise:** For the first 5 days of fever, advised screening test is Dengue NS1 Antigen, After 7-10 of fever onset, the recommended screening test is Dengue IgG and IgM Serology.

**Advise:** Please note that this is a screening test only. Advised confirmation with Dengue by PCR for further diagnosis.

Please correlate results clinically.

Chikungunya IgM				Serum Sample
<b>Accession No:</b> DEMO_BARCODE	<b>Collected On:</b> 20-Jan-25 14:57	<b>Received On:</b> 20-Jan-25 19:28	<b>Approved On:</b> 20-Jan-25 20:31	
Observation	Result	Unit	Biological Ref. Interval	Method
Chikungunya IgM	Negative			Lateral flow immuno chromatography

**Advise:** Please note that this is a screening test. Advised confirmation with RT-PCR for Chikungunya.

**Sample Type:** Serum

Please correlate results clinically.



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Urine R/M				Urine Sample
<b>Accession No:</b> DEMO_BARCODE		<b>Collected On:</b> 20-Jan-25 15:00	<b>Received On:</b> 20-Jan-25 19:29	<b>Approved On:</b> 20-Jan-25 20:31
Observation	Result	Unit	Biological Ref. Interval	Method
<b><u>Physical Examination</u></b>				
Urine Quantity	7.5	mL	7 - 8	Physical Examination
Urine Colour	Pale Yellow		Pale Yellow	Physical Examination
Urinary Transparency	Slightly Turbid		Clear	Physical Examination
<b><u>Biochemical Examination</u></b>				
Urinary pH	5.5	pH	6.0 - 8.0 pH	bromothymol blue
Urinary Specific Gravity	1.030		1.005 - 1.030	Ethylene glycol-bis t.a.a.
Urinary Protein	Negative		Negative	Tetrachlorophenol
Urinary Glucose	Negative		Negative	glucose-oxidase-peroxidase
Urinary Ketones	Negative		Negative	Sodium Nitroprusside
Urobilinogen	Negative		Negative	Methoxybenzene Diazonium
Urine Bilirubin	Negative		Negative	Dichlorobenzene-diazonium
Urinary Nitrites	Negative		Negative	hydroxy
Blood [In Urine]	1+		Negative	Tetramethylbenzidine
Leukocyte esterase	2+		Negative	indoxyl-ester-diazonium
<b><u>Microscopic Examination</u></b>				
Pus Cells [In Urine]	40-50	/HPF	1 - 2 /HPF	Flow Micro Imaging
Epithelial Cells (Squamous)	5-10	/HPF	0-2/HPF	Flow Micro Imaging
Epithelial Cells (Non-Squamous)	NIL	/HPF	0-2/HPF	Flow Micro Imaging
Urinary RBC	5-10	/HPF	NIL /HPF	Flow Micro Imaging
Hyaline Casts	NIL	/LPF	0-2/LPF	Flow Micro Imaging
Pathological Casts	NIL	/LPF	0-1/LPF	Flow Micro Imaging
Yeast Cells	NIL	/HPF	0-1/HPF	Flow Micro Imaging
Crystals	CALCIUM OXALATE PRESENT	/HPF	NIL/HPF	Flow Micro Imaging
Other Morphology	NIL		NIL	Microscopy

**Remarks:**

- Sample Quantity is observed after transfer to a Urinalysis Vacutainer Tube for preservation of sample.
- Note for Female Patients:** If the urine is collected during menstruation, red cells may be present in the urine.
- Microscopy:** Microscopy may have supplemented automated measurements, wherever necessary.

**Advise:** Please correlate results clinically.

Malaria Antigen				EDTA Whole Blood Sample
<b>Accession No:</b> DEMO_BARCODE		<b>Collected On:</b> 20-Jan-25 14:57	<b>Received On:</b> 20-Jan-25 19:28	<b>Approved On:</b> 20-Jan-25 20:31
Observation	Result	Unit	Biological Ref. Interval	Method
Plasmodium Falciparum	Negative			
Plasmodium Vivax	Negative			



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**Clinical Notes:** This test is used for the detection of antibodies of all isotypes against *P. falciparum* & *P. vivax* in blood samples. Species Specific Serologic tests for malaria are particularly useful for epidemiologic surveys and for detection of infected blood donors. Such tests do not reliably differentiate current from past infection. A negative result does not rule out the possibility of malarial infection, as the antibody may not develop in the early stages of the disease.

**Sample Type:** EDTA

Please correlate results clinically.

## Typhidot IgM

**Accession No:** DEMO\_BARCODE **Collected On:** 20-Jan-25 14:57 **Received On:** 20-Jan-25 19:28 **Approved On:** 20-Jan-25 20:31

Observation	Result	Unit	Biological Ref. Interval	Method
Typhi Dot (IgM)	Negative			Immunochromatography

### Clinical Significance :-

- (1) TyphiDot (IgM) measures recent infection.
- (2) These tests are intended to be used as screening test. Positive test must be Confirmed with confirmatory testing method(s).
- (3) Specimens containing unusually high titre of heterophile antibodies or RA factor may give false positive results.
- (4) A negative result indicates absence of detectable antibodies. However, a negative test does not rule out *S. Typhi*.

Please correlate results clinically.



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