



HEALTH HOLDING

HAFER ALBATIN HEALTH  
CLUSTER  
MATERNITY AND  
CHILDREN HOSPITAL

<b>Department:</b>	Laboratory and Blood Bank ( Haematology)		
<b>Document:</b>	Internal Policy and Procedure		
<b>Title:</b>	Pleural ,Pericardial and Peritoneal Fluid Cell Count		
<b>Applies To:</b>	All Laboratory Staff		
<b>Preparation Date:</b>	January 07, 2025	<b>Index No:</b>	LB-IPP-062
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## 1. PURPOSE:

- 1.1 Evaluate body fluids for presence of RBC and WBC.
- 1.2 To establish system & set responsibilities for work

## 2. DEFINITONS:

N/A

## 3. POLICY:

- 3.1 The proper processing for the body fluid cell total count and differential.

## 4. PROCEDURE:

### 4.1 Specimen Requirement

#### 4.1.1 Specimen Type :

- 4.1.1.1 pleural
- 4.1.1.2 peritoneal
- 4.1.1.3 pericardial fluids

#### 4.1.2 Tube Type :

- 4.1.2.1 Green tube or lavender tube

#### 4.1.3 Amount Required : 2 ml

#### 4.1.4 Delivery Arrangement: As soon as possible and should not exceed 30 minutes from collection time

#### 4.1.5 Temperature Restriction: 37<sup>o</sup> C

Time of the test : Daily morning

#### 4.1.6 Stability: 2 hours at RT. Do not refrigerate

#### 4.1.7 Unacceptable SP:

- 4.1.7.1 Clerical Error
- 4.1.7.2 Clotted
- 4.1.7.3 Refrigerated

### 4.2 Handling instruction

#### 4.2.1 Specimen should be brought directly to the laboratory after collection. Do not store

### 4.3 Steps:

#### 4.3.1 Macroscopic examination of the specimen at the time it is submitted to the laboratory

Note for the color and appearance of the fluid.

Appearance is reported as clear, Turbid or bloody and use slight, moderate and heavy to grade the appearance.

#### 4.3.2 Determination of total cell count by the cell counter machine.

#### 4.3.3 Hemocytometer Method: (Perform the count as quickly as possible

#### 4.3.4 Fill the counting chamber with undiluted body fluid

If grossly bloody fluid, dilute with 3% acetic acid.

- 4.3.5 Hemocytometer Method: (Perform the count as quickly as possible)
- 4.3.6 Transfer well- mixed fluid to the hemocytometer chamber
- 4.3.7 Count all WBC or RBC in 4 large square.
- 4.3.8 Take the Average of the cell count ( Total number of cells in 4 squares divided by 4 ).
- 4.3.9 Multiple the result by 10.
- 4.3.10 The results will be cells per uL

#### 4.4 Differential Count:

- 4.4.1 Centrifuge at 1000 rpm for 5 minutes
- 4.4.2 Remove supernatant .
- 4.4.3 Resuspend button of cells in the residual fluid.
- 4.4.4 Air dry and stain with Giemsa- Wright Stain.
- 4.4.5 The smear then introduced to the doctor in charge for microscopic examination and reports the result report form by Count and evaluate 100 cells

#### 4.5 Reference range

- 4.5.1 Pleural fluid: clear and colorless to pale yellow;
- 4.5.2 Peritoneal fluid: clear and colorless to pale yellow
- 4.5.3 Pericardial fluid: clear and colorless to pale yellow

Microscopically:

Test	Age	Reference Range	Unit
Peritoneal WBC	All	0-500	cell /uL
Peritoneal RBC	All	0 – 100	cell /uL
Pleural WBC	All	0 – 1000	cell /uL
Pleural RBC	All	0-10	cell /uL
Pericardial WBC	All	0-500	cell /uL
Pericardial RBC	All	0-100	cell /uL

## 5 MATERIALS AND EQUIPMENT:

- 5.1 Hemocytometer
- 5.2 Microscope
- 5.3 12 x 75 test tube
- 5.4 Manual counter
- 5.5 Petri dish with moist gauze
- 5.6 Reagents
  - 5.6.1 Isotonic diluents – use cell dyne diluents (ready to use)

## 6 RESPONSIBILITIES:

- 6.1 This policy applies to all Hematology technologists involved in this special Hematology test
- 6.2 The doctor in charge



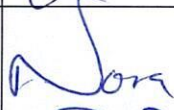



## 7 APPENDICES:

N/A

## 8 REFERENCES:

- 8.1 CRC Handbook Series in Clinical Laboratory, Science, Section 1: Hematology Volume III, 1980. CRC Press, Inc. Boca Raton, Florida.

9. APPROVALS:

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