



## **Preparation of solutions for wet mount; the advantages and disadvantages of each solution:**

### **Preparation of solution for wet mount**

#### **1- Normal Saline solution**

- NaCl 0.85 gm
- D.W 100 ml

#### **• Procedure**

Dissolve NaCl in D.W put in bottle with stopper. Solution can be used in for long period.

## **Saline wet mount**

- Small quantity of faeces is diluted with normal saline (0.9%) placed on clean glass slide, and cover with cover slip.
- Smear is examined under microscope.
- It is used to detect trophozoites and cysts of trophozooids and eggs and larvae helminthes.
- It detect live motility of *E. histolytica*, *Giardia lamblia* and *Balantidium coli*.

#### **• Advantage of direct wet mount**

- 1- It is fast, simple procedure and provides a quick answer when positive.
- 2- It provides an approximation of the parasitic burden.



- 3- It can be used with unpreserved specimens to detect the characteristic motility of trophozoites .
- 4- It can be used as a safeguard, as some protozoa may at times not concentrate properly because of unknown factors.
- 5- It can be detected the motile trophozoites stage of the protozoan species.

- **The disadvantage of this technique**

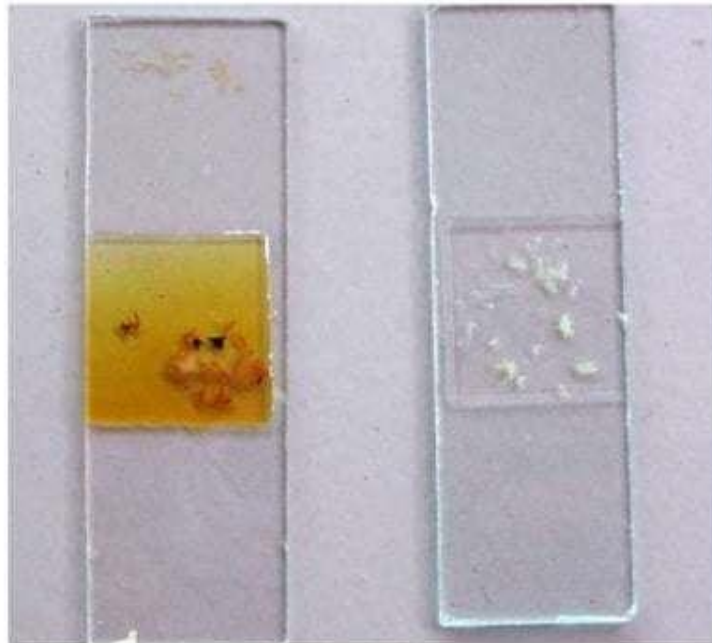
1-preparation dries within a few minutes rendering it unreadable and unreliable to visualize live nematodal larvae

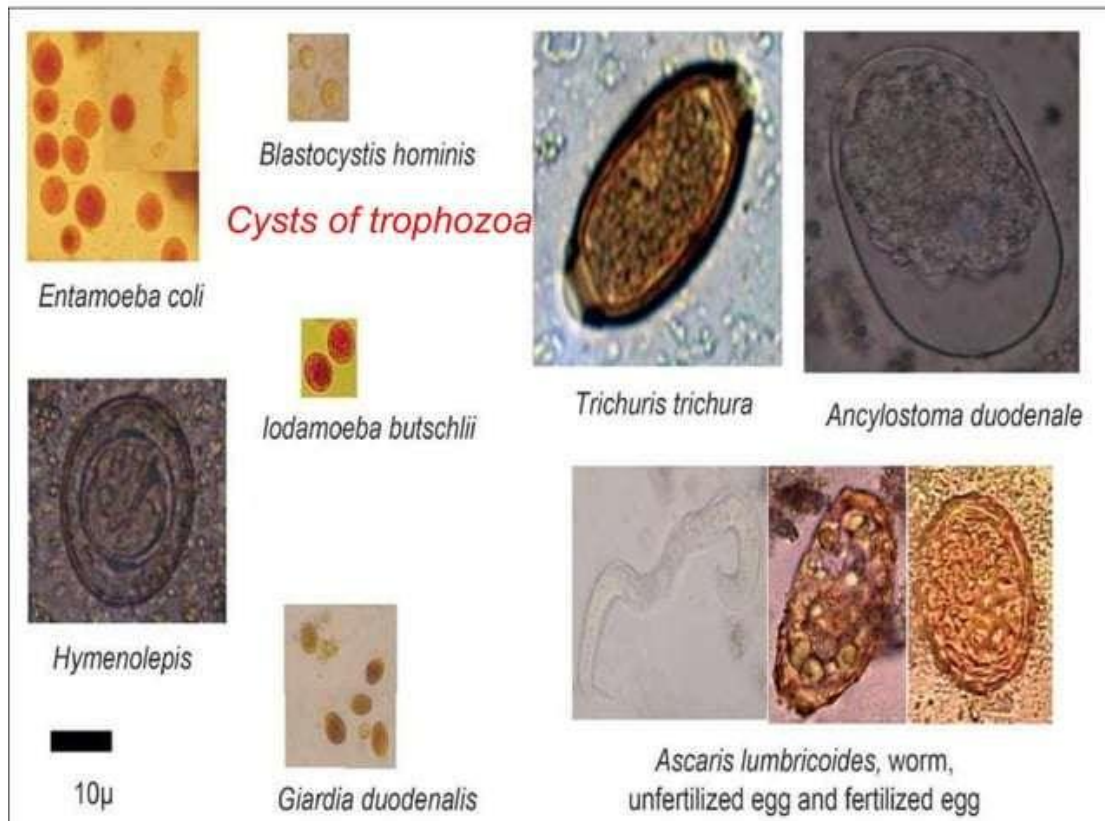
2-each time a fresh preparation is required to view slides .

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IODINE WET MOUNT

SALINE WET MOUNT





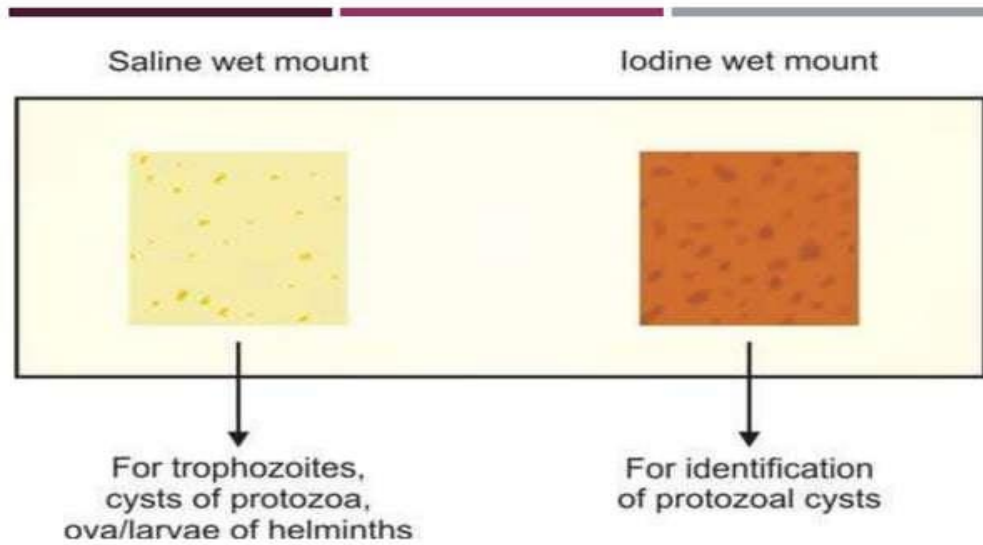
## 2. Iodine stock solution

To prepare 125 ml of iodine stock solution:

- Potassium iodate 0.44 gm
- Potassium iodide 5.62 gm
- Concentrated HCl 1.12 ml
- D.W 125 ml

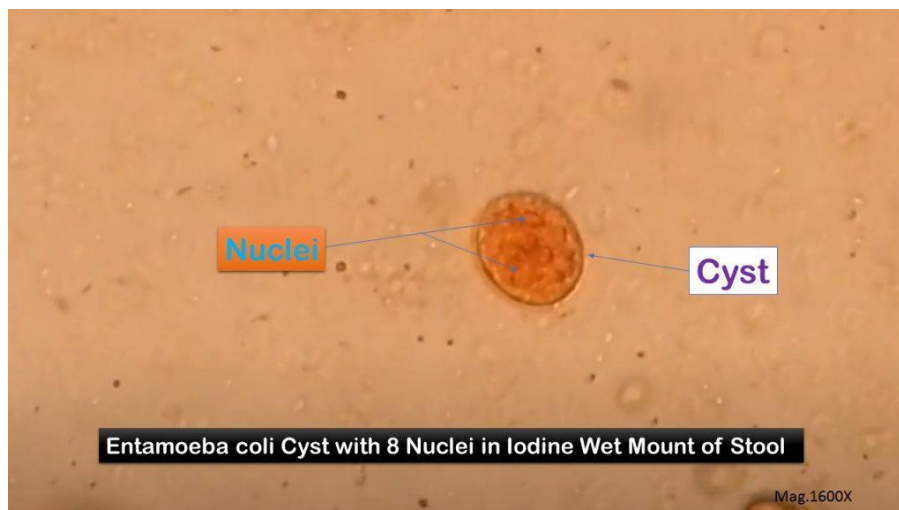
## Procedure

- 1-Weight each of pot. Iodate and Iodide, put in flask with 125 ml capacity
- 2.add half of amount of d.w , keep stirring to dissolve all the chemical materials, add the HCl
- 3-carefully with stirring, add the half of D.w.
- 4.keep the solution in dark bottle in refrigerator , can be use within one month



### Advantage of Iodine solution for wet mount

- 1-Iodine mount are examined for amoebic and flagellate cysts.
- 2-the method is simple to perform, quick and inexpensive.
- 3-facilitating direct visualization of parasitic ova and cyst morphology





### 3.Preparation of eosin solution for wet mount

Prepare eosin Y stock solution:

- 1-Add 2.0 g of water-soluble eosin Y to 40 mL of doubledistilled H<sub>2</sub>O, and mix until dissolved.
- 2-Then add 160 mL of 95% ethanol, and mix. Store at room temperature.

What is the eosin solution?

Eosin Y Solution (Aqueous) is intended for use in the histological demonstration of cytoplasm and is commonly used as a counterstain for Hematoxylin. ... Erythrocytes, collagen, and the cytoplasm of muscle or epithelial cells will stain with different shades of pink.

**Cytoplasm: Pink to Red.**

#### ❖ Advantage of eosin solution for wet mount

- 1- detection of cysts or trophozoites
- 2- they can be much more easily detected against the pink- red background of eosin preparation.

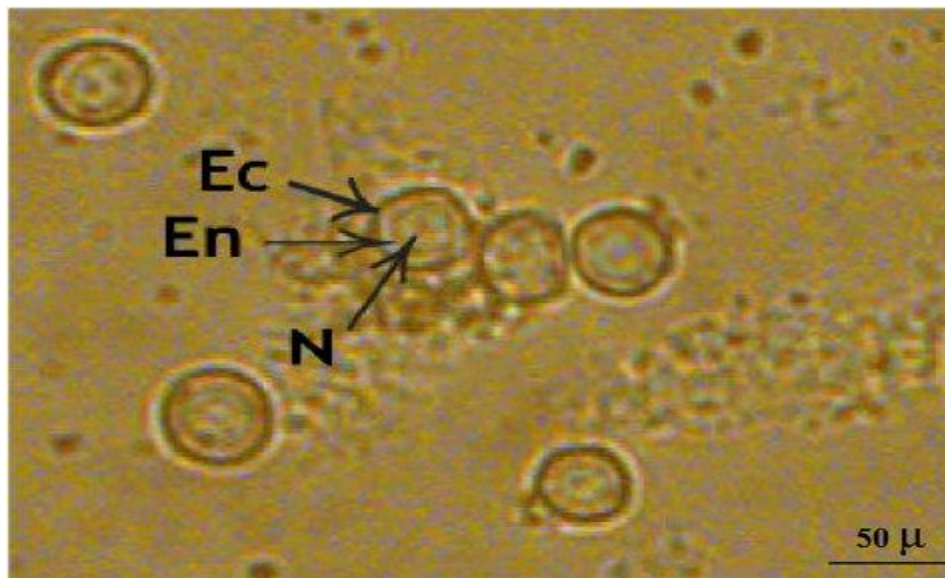


Fig. 2 Stained Acanthamoeba cysts with eosin wet mount stain. The cysts appeared reddish-pink with double walls ectocyst ( Ec ) and endocyst ( En ) and central nucleus ( N ) (×400)

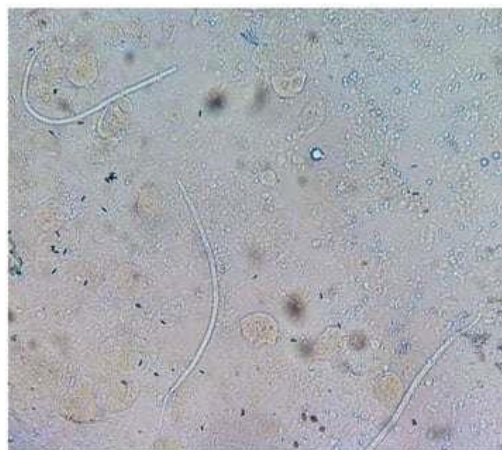




## Wet preparation

- A drop of anti coagulated blood can be placed on a clean glass slide.
- Cover the cover slip and examined under microscopically for large, motile, exo-erythrocytic parasites. such as : trypanosomes and microfilariae.

### Microfilaria





## Buffered methylene blue wet mount

- Stains only trophozoites of amoeba
- It does not stain amoebic cyst or trophozoites and cyst of flagellates.
- Nucleus and the inclusions such as RBC or yeast cells stain dark blue
- Cytoplasm stains light blue

