**Microorganisms in red meat ,chicken ,fish &egg**

Meat is considered as an excellent growth media for a variety of M.Os due to many factors make it suitable for microbial growth & reproduction ,such as :

1-elevated moisture .

2-presence of (CHO & nitrogen) compounds.

3-minerals.

4-approprite PH for growth the M.Os.

* The meat & its products contains microbial flora on its surface.
* M.Os inside the meat come from many different sources.
* Muscles of the animal contains few of M.Os than surface but it increase after or during slaughter the animals.

**Important microbes that contaminated of meat:**

**Bacteria *salmonella ,staphylococci , streptococci, micrococcus, pseudomonas , lactobacilli & proteus.***

**Moldsmucor , rhizopus, cladosporium.**

**Fish meat**

It is spoiled faster than red meat because of:

1) high moisture.

2)high PH.

3) lipids in fish oxidize faster than lipid in red meat.

4) the tissues of fish are softer & more disassemble .

**Important microbes that contaminated of fish:**

***Pseudomonas,Vibrio,E.Coli,Lactobacilli,Salmonella,Clostridium*.**

**Chicken**

**M.Os in chickens include:**

**G+ staphylococci,streptococci,lactobacillus, clostridium.**

**G- E.coli, pseudomonas,salmonella.**

**Eggs**

The eggs represents a perfect media for microbial growth because its contents of proteins ,lipids& vitamins .

**Note:-** the sample taken wiping by swab from solid shell or biopsy of the liquid (albumen).

 **Important microbes that contaminated of egg**

Spoilage of egg shell by colored on the shell.

*Salmonella penicillium, cladosporium*

Spoilage of egg contents.

 *Pseudomonas proteus*

 Green putridity black putridity with

 Dislike smell .

**Lab work**

Procedure :

Samples taken from all parts of meat mash to get a homogeneous mixture of these samples then taken 10 grams of this homogeneous mixture are transferred into sterile container, added to him dilution solution (90 ml of D.W + 1% peptone) to get the emulsion by mortar to give us a 10 – 1 .the mixture is left for 3-5 min just before making other dilution.

**Nutrient Agar For General Growth (Aerobic Plate Count):**

 10**-4** 1ml or 0.1ml 37C**O** /24 -48hr.

**For the Coliform Bacteria Used:**

**macconkey agar**

 10**-2** 1ml or 0.1ml 37C**O** /24 -48hr.

**For the spore former used:**

**Nutrient agar**

**10-3**

 **Water bath 80 Co / 15 min cool 1ml 37Co /24hr**

 **0.1ml**

**For the Lipolytic Bacteria:**

**Butter fat agar**

10**-2 1ml (pour) / 0.1 (spread) incubation 37Co / 24hr**

**For The Proteolytic Bacteria**

**Casein agar**

10**-1 1ml (pour) / 0.1 (spread) incubation 37Co / 24hr**

**For The Staphylococcus Bacteria :**

Staph 110

agar

10**-3 1ml (pour) / 0.1 (spread) incubation 37Co / 24hr**

 **For the Lactobacilli :**

**Lactic agar**

**Or MRS**

10**-2 1ml (pour) / 0.1 (spread) incubation 37Co / 24hr**

MRS=  De Man, Rogosa and Sharpe

**For The Salmonella Bacteria :**

Salmonella.Shigella agar

10**-1 1ml (pour) / 0.1 (spread) incubation 37Co / 24hr**

**Mold & Yeast**

**Yeast extract agar**

10**-1 1ml (pour) / 0.1 (spread) incubation 25-28Co/ 48hr**