Department of biology

((Microbiology))

stage 2

second lecture

Bacterial Count

By

Msc. Zahraa Jawad Kadhim

Bacterial Count

Many bacteriological studies require that we be able to determine the number of organisms that are present in a given unit of volume. Several different methods are available to us for such population counts. The method one uses is determined by the purpose of the study. In order to observe microbial reproduction ,it is necessary to determine numbers of M.O., the estimation of microbial population or count could be:

Direct Count of cell number: Under the microscope ,used in food microbiology to assess the sanitation level of product and it is also used for performing blood cell counts in hematology. The electrode of a Coulter

counter Indirect count : The growing of M.O. on a suitable media and use the number. of the development M.O. as colonies to determine the number. of cells since each microbial cell multiply & from one colony , thus the number of colonies should give the number of lives bacteria that can grow under the incubation condition employed.

There are different methods that can be employ which include :

A)Total count ….(for counting living and nonliving cells)

1- Breed method

2- Haemocytometer (counting chamber)

3- Turbidity measurements: to determine the number of bacteria in a culture sample with Optical density (O.D) by spectrophotometer

B)Viable plate count …(counting living cellsonly)

1-Dilution to extinction

2- Pour plate method

3-Most probable number(MPN)

4-Spread plate method

5- Membrane filter method