

Prokaryotes



**ASSIGN
BUSTER**

Liana Same AL-hasty . Engineer : Madam Sarah . Introduction This lab is purposed to familiarize basic equipment and techniques used in the study of microorganisms. In addition, learn some basic techniques used in identifying prokaryote and make and view microscope slides of some common prokaryote. In this lab , I worked two experiments , the first one is cultivation bacteria " colony and When microorganisms are cultivated in the laboratory, a growth environment called a medium is used , this medium should be sterile , When grown and isolated by lacing onto medium that known as inoculation .

The purpose from this experiment is describe isolated colonies. The second experiment is " Gram stain " m is commonly used to assist in bacterial identification. It is one of the important techniques to classify bacteria . Len fact it does distinguished between two different kinds of bacterial cell walls. This staining method separates bacteria into two groups based on the thickness of their cell wall. Materials and methods Isolation of bacteria equipment : Agar plate & Petri dish & broth Ethanol 70 % marker

Bunsen burner Wire loop Incubator Gram stain equipment : -Slides -Flam - Crystal violet -Iodine solution -Alcohol -Seafaring - Kill immersion -Compound microscope Staining method -Obtained slide and put a drop of water into it . - Put inoculation bacteria onto slide. - Put the slide onto low flame even dry. - Added crystal violet and dyed for one minute. -Added iodine solution and dyed for one minute. -Washed with alcohol , dyed for 10-30 seconds. Note: here make sure if the slide transparent. -washed with water. -Added seafaring solution and dyed for 30 seconds. Waited even dryer. Added one drop of oil immersion. -put the slide on the stage of compound microscope. -

finally, watched the slide. Isolation of bacteria method -wiped working area with disinfectant. -Obtained a sterile Petri dish of nutrient agar, kept lid on, and used the marker to divided the Petri dish, into two sector. -opened the lid slightly, inoculate sector number 1 with thumbprint. -Take sterile wire loop to transferred colony from a broth to an agar plate. -The loop should be cooled in the air for 10 to 20 sec and placed on the agar surface. -Remove a sample from a broth culture by using a sterile wire loop. Transferred the sample from broth to agar plate. - When inoculated an agar plate, draw the loop very lightly over the surface while being careful not to break the surface. A zig-zag motion used. -The name wrote on the plate, then placed it's into incubator in a 37 degree incubator for 48 hours. Result of Gram stain: Result of Isolation of bacteria in the following pictures : Discussion : Microorganism are organism that are too small and cannot be seen with naked eye everywhere in our daily life surrounding. They are in the air we breathe, the foods we eat.

Aseptic transfer is the transference of bacteria or other microbial cultures from one container to another while maintaining purity of the culture. The scientist is left working with mixed cultures. Pure cultures can be derived from mixed cultures through isolation of cultures and this also requires that sterile (aseptic) techniques to be used. Normally transference is done from colonies. A colony consists of usually several million cells that are assumed to be the descendants from one cell. Inoculations from one media to another, therefore, is usually done by removal of a few million cells from one colony into a new environment.

This must be done with the integrity of all colonies remaining intact. Through the use of sterile techniques, this can be accomplished successfully. There are a number of tools that are used for inoculation procedures. Inoculating loops are used when transferring members of a broth culture to another broth, plate media or an agar slant. Inoculating needles are used when inoculating a broth culture from a colony on.