Inoculation of Agar Plates Using a Cotton Swab

A cotton swab is usually used to obtain a sample from a patient or an environmental source, and occasionally from a culture grown in the laboratory. Sterile swabs may be dry or they may be in sterile water, depending on the sample source. Care must be taken not to contaminate the swab by touching other surfaces. Transfer to the growth media as quickly as possible. Depending on your purposes, you can inoculate the agar surface using a cotton swab in a couple of ways. Described below is the Zigzag method of inoculation. This inoculation pattern is usually performed when the sample does not have a high cell density or with pure cultures when isolation is not necessary.

1. Hold the swab comfortably in one hand and lift the lid of the petri dish with the other (see picture below). Use the lid as a shield to protect the agar from aerial contamination.

2. Lightly drag the cotton swab across the agar surface in a zigzag pattern

3. Replace the lid on the petri dish base. Dispose of the swab in the proper receptacle (i.e. the orange biohazard bag).

4. Label the base of the plate with your name, date, type of agar plate, and environmental source sample.

5. Incubate the plate in an inverted position at 37 °C.