**Food Contamination**

Purpose:

To investigate the bacterial growth from food that has been dropped on the ground for various lengths of time.

Materials:

5x Jelly babies in a plastic bag Sticky tape

6x agar plates Stopwatch

Sterile forceps Permanent marker

Procedure:

1. Without opening the agar plates, label the bottom with the time: 0 seconds, 5 seconds, 10 seconds, 30 seconds, 60 seconds and untouched. Also add the initials of your group members.
2. Using the forceps, place a Jelly Baby on the floor for 5 seconds, then pick it up with the forceps and wipe it over the agar plate. Open the plate’s lid only just enough to fit the Jelly Baby and the forceps through. Also, do not breathe over the dish while you are doing this.
3. Close the lid and seal with sticky tape.
4. Repeat the above procedure for 10 seconds, 30 seconds and 60 seconds.
5. Do not put the last Jelly Baby on the ground; simply wipe it on the agar plate labelled 0 seconds.
6. The final agar plate, labelled untouched, should be sealed with sticky tape without opening it.
7. All the plates will now be incubated for several days at 37oC.

Results:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Colony | Shape & Size | Edge | Elevation | Colour | Texture |
| 0 seconds |  |  |  |  |  |
| 5 seconds |  |  |  |  |  |
| 10 seconds |  |  |  |  |  |
| 30 seconds |  |  |  |  |  |
| 60 seconds |  |  |  |  |  |
| Untouched |  |  |  |  |  |

The following will assist you in your description of shape, size, edge and elevation.

* Shape & Size – small, large, round, irregular
* Edge - smooth, curved, wavy, has lobes
* Elevation – flat, raised, concave
* Texture – ‘hairy’, bumpy, smooth

1. What was the purpose of the untouched agar plate?
2. What was the purpose of testing a Jelly Baby that had not touched the floor?
3. List some variables that could be better controlled in this experiment.
4. Are all the species of bacteria on the agar plates likely to be harmful if ingested? Explain.
5. What can you conclude from this experiment?
6. List the various types of defences the body has to protect itself from bacterial invasions through eating contaminated food.