

## Aerial contamination

The aim of this experiment is to demonstrate that spores of bacteria and fungi, as well as air borne bacteria are present all around us. We can show this by exposing nutrient agar plates to the air, the nutrient agar allows for the culture of these spores and bacteria.

- 1) You are provided with 4 Petri dishes of nutrient agar (N plates). On the base of the plate write your names and the date using the permanent marker pen.
- 2) Place **3** of these plates, with the lids upwards, in a row in front of you. Remove all the lids from the 3 plates and start timing, after 10 minutes replace **one** lid, and label that plate appropriately with the time the lid was replaced.
- 3) Replace a second lid after 30 minutes and the last after 60 mins. The fourth plate is an unexposed control, to check the sterility of the medium.
- 4) Make sure that your plates are labelled correctly, and then stack the plates together with the lids downwards, this prevents condensation water dropping onto the nutrient agar surface. Using masking tape, tape them together in a stack. The plates will be incubated at 30°C.

Airborne microbes and their spores will have landed on the nutrient agar surface during the exposure. Some of these will grow into visible colonies of bacteria and fungi on incubation. The plates will be brought back to you in your next session so that you can count the number of colonies you can see. A graph of our data will then be drawn to try and correlate exposure time to number of colonies grown.

What do you think the answer will be?

Can you write a hypothesis for this?