

# TRYTHIS activity *How “clean” is your mouth?*

In this activity, you will capture and culture microorganisms normally present in your mouth and on your lips. A sterile agar growth medium provides nourishment for microorganisms, which will appear in colonies (distinctive growths) over time.

**Materials:** agar, petri dishes, sterile swabs, tape, wax pencil

- ✓ Use only disposable petri dishes.
- ✓ Do not place tape around the circumference of the lid.
- ✓ Once dishes are taped, do not remove the tape.
- ✓ When storing cultures, do not stack petri dishes more than three high on incubator shelves.
- ✓ Wash your hands thoroughly with soap before and after the activity.
- ✓ If you have a cut or abrasion on your hands, wear gloves.

1. Lick your lips and then swab them with a sterile swab. Brush the swab lightly on the surface of sterile agar in a petri dish.
2. Put the lid on the petri dish and tape it shut across the top and the bottom in the form of an “X.” It will remain sealed during this activity.
3. Label your dish with your name and date of the experiment. Set it aside and leave it to incubate upside down at about 30 °C.  
(a) Create a data table and make observations on you sealed dish daily, over a 4-day period. Consider the **shape, colour, texture, and size** of colonies. Estimate how much of the surface has microorganism growth.

	Observations			
Day	Shape	Colour	Texture	Size
1				
2				
3				
4				

4. Dispose of your petri dishes as instructed.  
(b) Based on your observations, what conditions are necessary for the growth of microorganisms?  
(c) What steps could you take to identify the microorganisms on your culture plate?  
(d) Hypothesize on what you might observe if the dishes were cultured for another 4 days.  
(e) Why is it important to keep the petri dishes sealed?  
(f) Compare the growth on your dish with others in the class.  
☞ What factors could account for differences?  
☞ Why would there be uniformity?