

1. Why does e.coli need to be incubated at 37°C?

E. coli originated from the bowels of mammals which means that it grows optimally at the biological temperature of 37°C.

2. What is K12 e.coli? Why is it commonly used in labs?

K-12 e.coli is one of the most studied microbes and has been modified to only survive in certain conditions (for added safety).

3. What visual cues are used by scientists to identify microbes in plate cell culture?

The shape, color, size, surface appearance and texture of the colonies present can be used to identify microbes.

4. Why is sterility important in cell culture?

Sterility helps to avoid contamination in your cell culture. In some cases contamination can be dangerous if you are not using selective media you could have grown a large number of microbes.

5. Why does yeast need to be incubated at 30°C?

This is the optimal temperature for yeast cells to grow and reproduce.

6. Why do we invert the agar plates before placing them in an incubator?

This avoids the accumulation of condensation from the loss of water in the agar. If you did not flip your plate the surface of your culture may be compromised.

7. Why do we place a humidity chamber over plates when they are in the incubator?

To avoid the plates drying out. If the plates dry out this will limit their nutrient uptake and the cells will eventually die. High humidity helps to avoid this, so in incubators without the ability to add moisture/humidity into the air require the use of humidity chambers.

8. Which stencil do you think will generate the best colonies? Why?

Opinion based. No incorrect answer.

