
Overview of Module 4

1. What is one application of cell culture?

2. What is the difference between a Biological Safety Cabinet (BSC) and an Incubator?

3. List three things that you should NOT do while working in a BSC.

4. Which solvent do we use to sterilize everything entering the BSC or incubator?

5. Why do we passage cells?

6. Why do you need to keep track of the passage number?

7. Why is our cell culture media red?

8. What does it mean if the cell culture media is yellow?

9. What does it mean if the cell culture media is purple?

10. Why is it important to not leave active trypsin in the cell culture flask for too long?

11. What deactivates trypsin?

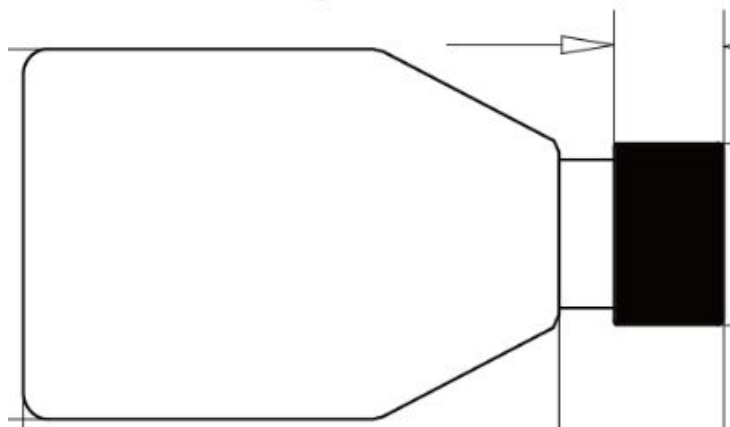
Practice with Cell Culture Techniques

1. Match the key term to its role in cell passaging:

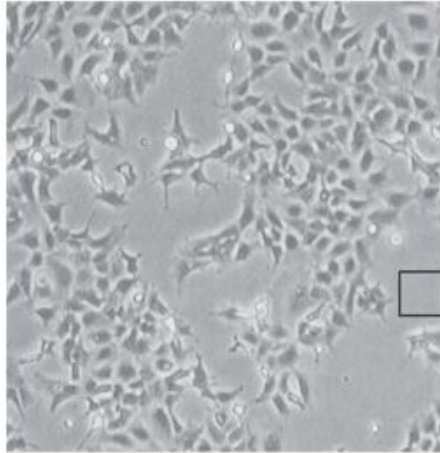
- | | | |
|--------------------|-------|---|
| A. Ethanol | _____ | Separates cells from liquid and debris |
| B. CO ₂ | _____ | Its calcium and magnesium ions deactivate trypsin |
| C. Phenol red | _____ | Added to prevent to help prevent contamination |
| D. PBS | _____ | Breaks down proteins involved in cell adhesion |
| E. Centrifuge | _____ | Removes excess liquid from flasks and conical tubes |
| F. FBS | _____ | 5% inside incubator to simulate biological conditions |
| G. Antibiotics | _____ | Our cell culture media |
| H. Trypsin | _____ | Visualizes pH changes |
| I. Aspirator | _____ | Sterilization solvent |
| J. DMEM | _____ | Removes excess media and cell waste from flask |

2. If I do a 1:9 Split on one T-25 flask, the cells will be reseeded in _____ T-25 flasks or _____ T-75 flasks.

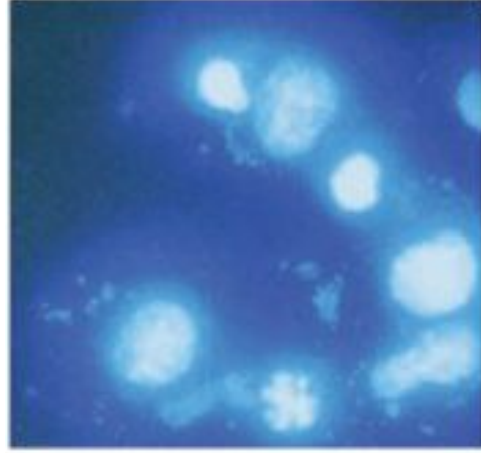
3. Practice properly labeling your T-25 flask!



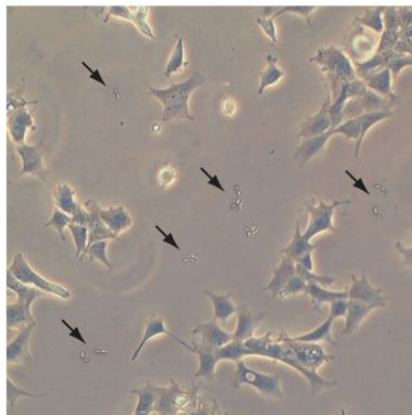
4. Identify the contamination present in the cultures below as bacterial, fungal, yeast, or mycoplasma:



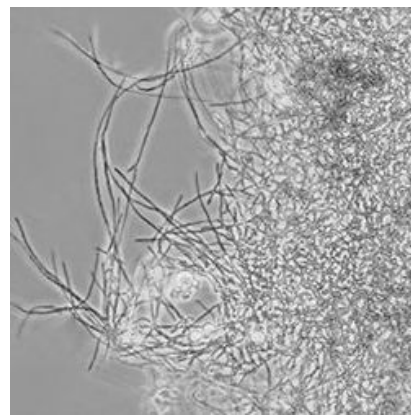
(A)



(B)



(C)



(D)

(a) Picture A contains _____ contamination.

(b) Picture B contains _____ contamination..

(c) Picture C contains _____ contamination.

(d) Picture D contains _____ contamination.