College of the Canyons: Introduction to Biotechnology

Sterile Techniques, Tissue Culture, and Cell Counting Post Lab

1. Why are insect cells used in this lab (as opposed to say mammalian or plant cells?) List three reasons.

2. Why is the propagation of a cell line an important technique for a science?

3. Trypan Blue is a dye that indicates non-viable cells. Why do viable cells not take up the Trypan Blue dye?

4. Can the cells in a culture continue to grow at the same rate for an infinite period of time? Hint: think about the growth curve and what happens at the extremes and give three points..

5. Calculate the number of cells per ml of a sample in which you counted 85 cells per square (large corner square) using the hemocytometer. Show your work using dimensional analysis and express you answer in cells/ml.

6. Is there any correlation between the viable and non-viable cells present in the samples over time? Explain.

7. Review the technique, SOP,. Etc. List three pieces of equipment and five specific steps that you took that helped with your overall sterile technique.