



College of the Canyons: Introduction to Biotechnology

Gel Electrophoresis and DNA Analysis: Post Lab

1. What functional group is responsible for DNA's negative charge? Draw and name it.
2. If you were to use a 4% agarose gel instead of a .8% agarose gel, what effects would this make on the electrophoresis gel and why? Give three examples, ideas.
3. Name / describe three roles of the buffer solution in DNA gel electrophoresis?
4. Explain why "ladder DNA" was run with your gel. Name / describe three ideas relating to this idea.
5. What possible errors could occur if loading dye was not added to your sample before the loading of the wells? Name two issues / problems.
6. When graphing your distance migrated results, what form should the graph take (axis, units, etc) so that the results can be interpolated easily?
7. Explain how Ethidium Bromide allows us to visualize the DNA fragments. What are two features ANY DNA dye should have to be effective?
8. Describe how an endonuclease can be used to determine if a piece of DNA is linear or circular. Hint: review lab on gel electrophoresis.