## GEL ELECTROPHORESIS CONCEPT QUESTIONS

1. What is a marker or ladder? Why is this considered a standard in this lab?

2. Why is a ladder or standard necessary part of this lab? Why does each lab team need to run their own ladder or standard?

3. How does the size of the DNA fragment affect its movement or migration through the agarose gel during electrophoresis?

4. Name three components found in the **sample loading buffer.** What is the purpose of each of these components?

5. Predict what would happen if you forgot to add the sample loading buffer?

6. Why do you add 1X TAE buffer to the gel box?

7. What would happen if you added water instead of the 1X TAE buffer and ran the gel with the water?

8. Why is uncut DNA included as a part of this lab?

9. How can you tell that the restriction enzyme digestion has occurred?

10. What is the purpose of placing the gel in Carolina Blu –2 (a stain) after the electrophoresis?

11. Predict, in your journal, what the gel will look like after it has been electrophoresed and stained with Carolina Blu-2.