

Biology Project Lab (BIOL 2309)
GEL ELECTROPHORESIS HOMEWORK

Due: bring a hard copy at the beginning of class (check Course calendar for exact date)

***This assignment counts toward your "HW & Assignment Sheets" grade.
Credit: 5 points, if completed and submitted on time.***

Name: _____

Date: _____

Objectives. At the end of this activity you will be able to:

- Explain how gel electrophoresis works
- Prepare and perform gel electrophoresis

Part 1: Gel electrophoresis

Watch this [this JoVE video on gel electrophoresis](#) (if you are not on campus, it will ask you to log in with your husky account) and read the Gel Electrophoresis Activity sheet (attached together with this assignment sheet). Answer the following questions:

1. What is the role of the loading dye?

2. What is the purpose of the DNA ladder?

3. In our lab, instead of ethidium bromide we will use GelRed (Biotium, cat #41003). We will first run the samples on the gel, and then we will incubate the gel in a solution with GelRed. What is the function of GelRed?

4. Describe at least one good reason for replacing ethidium bromide with GelRed.

Part 2: Materials list

Make a list with all the materials you will need in order to perform gel electrophoresis. For each material include concentration and volume if relevant.

Reflection:

What was the most challenging part of this homework? Please explain.

List any additional the literature references you used.