DNA Gel Electrophoresis

Rationale:	
Special Observations:	
Results:	
Interpretation:	

Experiment Date:
Experiment Time:

Primary Experimenter (contact):
Other Experimenters:

Source: Rafael, Nathan Kruer-Zerhusen, Dujduan Waraho

Assembled: 6/27/2012

Reagent	Details	Quantity
Agarose		1%
1X TAE		70 mL
EtBr	For staining	n/a
Ladder (1 µL 6X loading dye)	(brand; size)→	5 µL
6X Loading Dye	(Promega; visible bands: 4 kb, 300 bp, 50 bp)	** **X**µL
DNA samples	See below chart for details	* µL

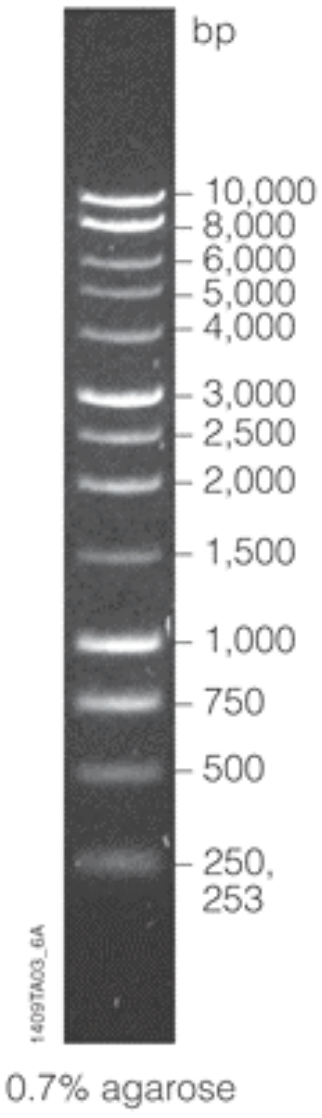
Lane 1	Lane 2	Lane 3	Lane 4	Lane 5	Lane 6	Lane 7	Lane 8	Lane 9	Lane 10

Procedure:

Critical Steps:

- Swirl agarose to make sure that all is melted (but not too vigorously to avoid bubbles)

The following is for a 1% Gel



- ☐ **Measure 0.7 g agarose and add to flask**
- ☐ **Add 70 mL 1X TAE to the flask**
- ☐ **Microwave the agarose for 1:00, or until all agarose is dissolved and the solution is completely clear and bubbling**
    - If the agarose is still suspended/undissolved, microwave for additional 10-20 seconds
    - CAREFUL, bottle will be extremely hot, watch out for steam coming from the bottle, hot gloves should be by the microwave
- ☐ **Cover flask with saran wrap (should be on top of the microwave)**
- ☐ **Obtain gel tray, box, and comb, then rinse with dH2O**
    - Comb size depends on experiment
- ☐ **Place gel tray in gel box sideways – the tray's rubber gasket should make a watertight seal against the gel box**
    - Make sure the gasket hasn't derailed
- ☐ **Insert gel comb**
- ☐ **When agarose is warm to the touch, add 7 µL SYBR green while gently swirling**
- ☐ **Once SYBR green has completely mixed, pour agarose into tray slowly**
- ☐ **Use the comb or a sterile pipette tip to sweep bubbles away from the important parts of the gel, then cover the gel while it cools to prevent debris from falling in**
- ☐ **Add 5X loading dye to DNA samples**
    - Bear in mind the maximum volume each type of comb can hold

- [ ] **When agarose has completely solidified, gently pull tray out of box, rotate tray, then re-insert tray so the wells are on the black side**
- [ ] **Pour 1X TAE into the box until it just covers the lanes**
    - Pour directly onto the lanes to expunge bubbles
- [ ] **Write down the order of your DNA samples, details about your DNA samples, and where the ladder(s) will go**
    - **AVOID putting ladder in the center because you want to differentiate sides**