

## Lab Report Outline Expt 5 (DNA purification) & Expt 6 (restriction analysis) (20 pts total)

**Abstract (2)** *The abstract should concisely tell you the results of the experiment and why they are important.*

### **For experiment 5 report**

Approximate yields and estimated purity of each of the plasmid DNA minipreps.  
Mention the any obvious sources of contamination.

### **For experiment 6 report.**

The results of the restriction and electrophoresis analysis. Briefly summarize the similarity between your gel electrophoresis pattern and that predicted by the sequence analysis programs. Summarize the potential sources of discrepancy in restriction fragment patterns if any.

**Introduction (2)** *Background material. Describe and diagram the desired target structure of the clones that you analysed.*

**Experimental Procedures (4)** *Sufficient detail should be included so that a trained biochemist (not necessarily a naïve student) can reproduce your results.*

*Note instances where your techniques differed from the protocols.*

Describe the details of the purification, digestion (buffer composition, enzyme concentration, reaction time), electrophoresis (gel percentage, buffer components, voltage (V/cm), time).

**Results (6)** **Tables and figures that concisely present your findings**

### **For experiment 5 report**

The gel photograph. Annotated (by hand is OK) with approximate observed plasmid quantities.

### **For experiment 6 report**

The gel photograph Annotated (by hand is OK) with approximate observed fragment sizes. Also show the “virtual gel” images from NEB cutter.

*The results should also be presented in text form, the tables and figures should be explained*

**Discussion (4)** **Insights into what may have gone wrong, explanations of surprising results, interpretations of significance data.**

Interpret the results of both the digestion and electrophoresis experiments. Discuss the extent to which the plasmid DNA that you purified is actually pure. How would you reduce the contaminants. To the extent that discrepancies exist between actual and virtual restriction digests, explain potential sources for the differences.

**References (2)**