

**Abstract (1)**

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

For experiment 2 include:

Your best estimate of the concentration of protein and DNA in each sample. Report DNA concentrations in micrograms per ml and BSA concentration in micromolar (base the concentration of pure DNA on your absorbance measurements and the fact that 50 micrograms/ml of DNA has an  $A_{260}$  of 1, and not on the label on the tube). Report the calculated extinction coefficient for BSA. The Protein concentrations of your unknowns should be reported in micrograms per ml (using BSA as a standard).

Comment on the reliability of the UV measurements for Protein and DNA estimation for each sample.

**Introduction (1)**

*Background material*

**Experimental Procedures(2)**

*Sufficient detail should be included so that a trained biochemist (not necessarily a naive student) can reproduce your results. Note instances where your techniques differed from the protocols.*

**Results (3)**

*Tables and figures that concisely present your findings*

For experiment 2 include:

The absorbance spectra of your 4 samples

A graph of absorbance vs standard concentration for the Bradford assay and for the ethidium bromide fluorescence assay

draw least-squares lines through the standard curve

and a horizontal line indicating the absorbance of your unknown.

*The results should also be presented in text form, the tables and figures should be explained. Include answers to questions asked in the text that are directly answered by your data.*

**Discussion (2)**

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

Use the following empirical formula (Warburg and Christian (1942) Biochem. Z. 310 384.) to estimate protein and DNA composition in your 4 samples.

$$\text{Protein (mg/ml)} = 1.55A_{280} - 0.76 A_{260}$$

$$\text{DNA (mg/ml)} = -0.036 A_{280} + 0.0629 A_{260}$$

Does it give reasonable estimates?

*Include answers to questions asked in the text that are more speculative.*

**References (1)**