Minilab report on RNA isolation due 10/11/07

One Figure – electrophoresis gel
One Table – Spectrophotometric analysis
A type-written analysis of the results

Figure

Figure must be in a professional format. You will need to crop the gel photo and then label it. See some of the figures in your textbook for how to do this (e.g. 10.27)

Figure must also include a figure legend. Don’t use the textbook figure legends as a model as they contain a bit too much detail. See the following legends that come from the original papers. All figure legends should contain the following components.

1. Figure number
2. Figure title. A fragment or a sentence that summarizes what the figure demonstrates or test. Often the figure title is in bold.
3. Brief description of experiment
4. Description of all the components of the figure. For example on a gel, it should be clear what is in each lane. There should be no components of the figure that are not described on the gel.
5. Figures should be self-sufficient

Figure 5. The function of the BREd is context-dependent. The core promoters indicated in A–E (wild type; wt) were tested in transcription assays alongside a derivative of each promoter that contained a mutated BREd sequence (df). The numbers below each panel are quantitation of the level of transcription relative to that observed at basal level for each wild-type promoter. Schematics of each promoter are shown at the right with the core promoter elements indicated; arrows depict the transcription start sites. The core promoters were compared in an in vitro transcription assay with HeLa nuclear extract in the absence or presence of the activator GAL4-AH(50 ng).
Figure 2. Scanning mutational analysis of the motif 10 sequence. A series of mutant CG4427 core promoters was constructed in which triple nucleotide substitutions were introduced in the downstream promoter region that encompasses the motif 10 sequence and the DPE. Outside the motif 10 sequence, A, T, and G nucleotides were mutated to C, and C nucleotides were mutated to A. Within the motif 10 sequence, the substitution mutations were designed to minimize the similarity of the sequence to the motif 10 consensus. The wild-type and mutant promoters were subjected to in vitro transcription analysis with a Drosophila nuclear extract. The transcriptional activity of each mutant promoter is reported relative to that of the wild-type promoter.

### Tables

All figures must follow a professional format. See the following example tables derived from papers. The all demonstrate components of a proper table.

1. Tables are numbered on the top line followed by a table title that describes the whole table
2. Column headings are separated from title and contents by lines
3. Data related to a give characteristic should be organized vertically
4. Footnotes or legends should be separated from the data by a line.
5. Never grid information within the data. Use spacing instead
6. Tables should be self-sufficient
Write a brief summary of your results analysis. One to two typed pages, 12pt font, double spaced. Refer to figures when appropriate. However, the summary should make sense even if the reader doesn’t refer to the figure.

Organization

Goal of Experiment (Evaluate Trizol RNA isolation protocol for classroom use)

Experiment (Sample of students isolate RNA from worms using Trizol reagent, then evaluate the RNA by electrophoresis and Spectrometry.)

Results (Brief summary of the electrophoretic and spectrometry results and what they mean)

Conclusion: Address goal of experiment.