RECIPES COMMON FOR LABS 4 AND 5

1.) Electrophoresis Buffer - TAE Running Buffer

A) One liter of stock solution (50X) - Use volumetric flask
1. TRIS Base 242.0 g
2. Glacial Acetic Acid 57.1 ml
3. 0.5 M EDTA (pH 8.0) 100.0 ml

B) TAE Buffer (1X) - Make up in 1 gallon plastic bottle
1. 50X stock buffer 60.0 ml
2. DI H_20 2940.0 ml

The 1X buffer solution is the solution given to the teachers. Need to keep plenty of this on hand as it is needed to make up the agarose solutions.

2.) Agarose for gels: 0.8 %

A) In a 250 ml flask, add 0.8g of agarose to 100 ml of TAE running buffer (1X).
1. Seal carefully

3.) Methylene Blue Dye

A) Make up a 10X stock solution, dilute it and give to the teachers.
1. Stock solution
   a.) 2.5 g Methylene Blue
   b.) 1.0 L H_20
2.) Solution for teachers
   a.) 100 ml stock solution
   b.) 900 ml H_20

PREPARATORS GUIDE FOR LAB 4

Version is intended for a Life Science course or intended as practical for a class using either Ver. A or Ver. B. Food coloring is used instead of DNA.

A.) Pack everything for Lab 4, Version C except the following:

1. Tubes containing loading dye "L"
   a.) They still need practive loading dye and practice tubes with red dye.
2. Methylene blue stain
3. Bottle for used stain
4. Funnel for used stain
5. The four DNA's

B.) The following items are needed for this lab:

1. 50% Glycerol
   a.) Each teacher gets twenty 1.5 ml tubes containing 0.5 ml glycerol.
   b.) Label the tubes "G"
   c.) Stock solution
      1.) 200 ml glycerol
      2.) 200 ml H_20
2. Food coloring
   a.) Each lab section gets 1.5 ml tube of each of the following colors.
   Labeled as follows:

Red	"11"	Stock solution of each color:
Yellow	"12"	50.0 ml H_2o
Green	"13"	50.0 drops food coloring
Blue	"14"	20 drops of india ink (or try methylene blue instead of india ink.

Put 200 ul of colored solution in a colored tube.
Dark green or dark blue tubes are the best.

MANAGEMENT SUGGESTIONS - LAB 4

Note: Preparing transparencies from baggies

Each student will record the bands produced on the gel at their station by tracing their own transparency.

1.) At the beginning of the lab have each student use the marking pen to draw a rectangle on one thickness of a torn open baggie.
2.) The glass slide should be placed on the plastic and it's perimeter outlined with the pen.
3.) Do this step at the beginning of lab, before slide gets wet from pouring the gel.

Please return:

* All slides and gel trays. Please rinse with water first.
* All foam test tube racks
* All colored tubes, if the tubes have been opened but not used up, please put a black dot on the lid of the tube.

Discard: Any white tubes that have been at stations. Waste gel stain

If you want to keep the used electrophoresis buffer, keep it in a tightly closed bottle. You can use it next time and it may last forever.