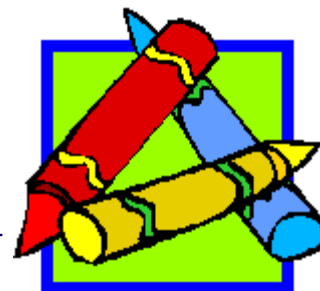


Chromatography Lab

LP _____ Date _____



Objectives:

- To separate pigments found in markers.
- To determine the primary colors of pigments.
- To calculate the Rf value of primary colors.

Materials:

- Filter paper
- Water
- Beaker
- Markers (3 per group)
- Pencil
- Ruler
- Calculator

Procedure:

1. Obtain a piece of filter paper from the teacher.
2. Measure 3cm from the bottom edge of the filter paper and using a **pencil**, draw a line across the width.
3. Each group will have 3 markers: a primary color (red, yellow or blue) a secondary color (orange, green, purple) and the last color is black or brown.
4. On the starting line, dab one color at a time, about 10 times each. The 3 colors should not touch. You will have 3 dots on the starting line.
5. In a beaker, add a small amount of water about 1 - 2 mL. The water should **not** touch the pigments!!!
6. Place paper in beaker flat edge down and let sit 10 - 15 minutes.
7. Take out paper and, with your pencil, follow the water line across to mark the boundary between wet and dry. This is your finish line.
8. With your pencil, circle each pigment and label. (i.e. **b** for blue)
9. Measure each of the 3 primary colors in cm from the starting line to where the pigment ended. Record in Table 1 and copy class results into Table 2.

Data : Table 1 - Observations of pigments

Color	Distance Pigment Traveled cm	Distance Water Traveled cm	Rf Value = Pigment/Water
Red			
Yellow			
Blue			



Table 2: Class results of Rf values

RED		Yellow		Blue	



Analysis/Results:



1. Name the three colors you **started** with:

2. Name the colors you **ended** with:

3. Attach the filter paper with a piece of tape over the “X” to the left.
4. Which color had the **highest** Rf value? _____
5. Rank the colors from highest to lowest.

6. Compare your results with the class. How do your values compare with the rest of the class? Explain any trends that you might notice.

Conclusion: 2-3 sentences on what you learned

