

1200 Lab – Demonstrating the properties of water

Flowers

Obtain an Erlenmeyer flask, fill it only about 2 cm with water, and add about 40 drops of food colouring – the colour should be quite dark. Get a flower and cut off the stem so that the flower is just above the top of the flask. Observe what happens over ~ 2 hours

What did you observe?

What property(s) of water contributes to this phenomenon?

Get a watch glass and capillary tube. Put a couple of drops of food colouring in the watch glass. Hold the capillary tube at a 45° angle and place it in the dye

What happens?

Why does this happen? What are the properties of water contributing to this phenomenon

Raisins

Fill up your beaker ~ 3/4 full of tap water

Stir in 1 tablespoon soda, and place 5 or 6 raisins into the beaker. What happens?

Then stir in 3 tablespoons of vinegar and watch what happens over the next ½ hour.

Why do the raisins behave in this manner?

What is the chemical reaction(s) taking place?

How is water involved in the behaviour of raisins and the chemical reactions?

Demonstrations:

Changing water to wine to milk to beer

Is it magic?

Why do you think these transformations are possible?

Pepsi and Mentoes

What happens when pepsi and mentoes are combined?

What is the property of water that contributes to this reaction?

Matches and detergent

What happens when we add a match to a tub of water?

What happens when we add a drop of detergent?

What is the property of water that contributes to this phenomenon?

Explain how all of the above properties of water make life on earth possible. Include examples of aquatic unicellular protists, plants and animals.