Life Is an Experiment

How can you recognize an American Chemical Society (ACS) ChemClub member? You might see him or her wearing a ChemClub T-shirt “Life Is an Experiment.” Many ChemClubs take this saying to heart for their meetings, trying lots of cool hands-on experiments. ChemClub members from Tarpon Springs High School, Tarpon Springs, Fla., added a definite wow factor by using a technique called radial chromatography. Try it yourself! And don’t forget: Life Is an Experiment!

Radial Chromatography

Safety: Wear safety goggles. Isopropyl alcohol is flammable and must be kept away from open flames. This experiment should be done in a well-ventilated area.

Materials

• White cotton T-shirt, washed and dried without fabric softener
• Several colored permanent markers (dark and/or bright colors)
• Isopropyl alcohol (90% or higher works best)
• Disposable pipette
• Beaker, plastic cup, or similar container
• Rubber bands.

1. Place a beaker, plastic cup, or similar container on the inside of the T-shirt. Flatten a portion of the T-shirt over the top opening of the beaker. Fasten a rubber band over the T-shirt and the top opening of the beaker to form a firm circle of fabric over the top of the beaker.
2. In the center of the circle, use one or more permanent markers to draw your choice of dots, circles, or other shapes. The final drawing should be about the size of a dime to the size of a quarter.
3. Working quickly, use a disposable pipette to place several drops of isopropyl alcohol in the center of the drawing. The fabric will absorb the rubbing alcohol, spreading the ink out in a pattern from this central point—a radial design.
4. Wait 15 to 20 seconds, then add more alcohol, if desired, to spread the pattern further. Try placing drops of alcohol on more than one area of the design.
5. Allow the fabric to dry before removing the rubber band and beaker.
6. Add as many designs as you wish, and then turn the T-shirt inside out and place it in a dryer on high for 15 to 20 minutes to help set the colors.

ACS ChemClub Community Activities Grants

Don’t forget April 1! No, not April Fool’s Day—it’s the start of the application period for ChemClub grants. Chartered Clubs can receive grants of up to $500 to help share chemistry in their communities. Learn more at: http://www.acs.org/chemclub.

—Erica K. Jacobsen