

Production Team

Patrice Pages, *Lead Editor*
Cornithia Harris, *Art Director*
Therese Geraghty, *Copy Editor*

Administrative Team

Marta Gmurczyk, *Administrative Editor*

Technical Review

Seth Brown, *University of Notre Dame*
David Voss, *Medina High School, Barker, NY*

Teacher's Guide

William Blean, *Editor*
Donald McKinney, *Editor*
Erica K. Jacobsen, *Editor*
Ronald Tempest, *Editor*
Susan Cooper, *Content Reading Consultant*
David Olney, *Puzzle Contributor*

Education Division

Mary Kirchhoff, *Director*
Terri Taylor, *Assistant Director, K-12 Science*

Policy Board

Ami LeFevre, *Chair, Skokie, IL*
Shelly Belleau, *Thornton, CO*
Steve Long, *Rogers, AR*
Ethan Sullivan, *Granada Hills, CA*
Scott Goode, *Columbia, SC*

ChemMatters (ISSN 0736-4687) is published four times a year (Oct, Dec, Feb, and April) by the American Chemical Society at 1155 16th St., NW, Washington, DC 20036-4800. Periodicals postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to *ChemMatters* Magazine, ACS Office of Society Services, 1155 16th St., NW, Washington, DC 20036.

Subscriber Information

Prices to the United States, Canada, and Mexico: \$16 per subscription. For more information, please contact the ACS Office of Society Services, 1155 16th St., NW, Washington, DC 20036; 800-227-5558 or 202-872-6067 (fax). Information is also available online at: www.acs.org/chemmatters.

Professional writers wishing to write for *ChemMatters* can request the writers' guidelines by sending an e-mail to: chemmatters@acs.org. The American Chemical Society assumes no responsibility for the statements and opinions advanced by contributors. Views expressed are those of the authors and do not necessarily represent the official position of the American Chemical Society. The activities in *ChemMatters* are intended for high school students under the direct supervision of teachers. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, from ignoring the cautions contained in the text, or from not following standard safe laboratory practices.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, now known or later developed, including, but not limited to: electronic, mechanical, photocopying, recording, or otherwise, without prior permission from the copyright owner. Requests for permission should be directed in writing to: chemmatters@acs.org.



© Copyright 2014
American Chemical Society
Canadian GST Reg. No. 127571347
Printed in the USA



NEWS

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