AH, SWEET MYSTERY OF LIGHT

Wanna bet there’s a rainbow hidden in syrup?

THE SETUP
All the colors of the rainbow can be seen in a glass of clear corn syrup. To see the light show, you will need two polarized lenses that you have removed from a pair of sunglasses, (check with the owner before you pop the lenses), a clear drinking glass, Karo syrup, a light source, and a helper. Look down at the light source through one lens, the drinking glass, and the second lens. Rotate the top lens to find the darkest position. Keep looking while your helper slowly pours syrup into the glass. One by one, beginning with blue, the colors of the spectrum appear.

INSIDER INFORMATION
Corn syrup has the ability to rotate polarized light. When you look through two polarized lenses that are at right angles to each other, light is blocked. By adding syrup, light emerging from the bottom lens is rotated slightly. This light is no longer at an angle that is stopped by the top lens, so some of it passes through. The emerging light shows up as a single color. The color that you see is the one that is rotated into a position that lines up with the top lens. As you increase the thickness of the syrup, you increase the rotation of polarized light so the next color moves into the line-up. When you see red, stop pouring. You’re at the end of the spectrum. Now, if you rotate the top lens you will be able to see all the colors again, one by one in order.

There are other optically active syrups. Check out honey and pancake syrups.