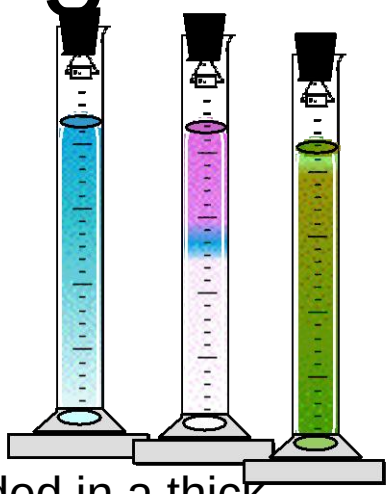
Liesegang Rings

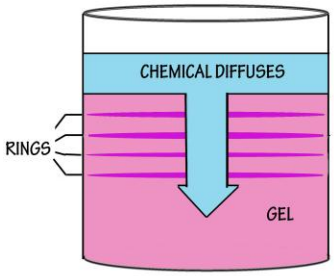


To do and notice:

How are the patterns in the cylinders similar to the patterns in the rock samples?

What is going on?

In each cylinder, one chemical is suspended in a thick gel. Another chemical is then layered on top of the gel. As the chemical on top of the gel diffuses, or moves through, the gel, it reacts with the chemical suspended in the gel. The chemicals react slowly and form colorful crystal formations known as Liesegang Rings. They are named after R.E. Liesegang, a German chemist and photographer who first documented them in 1896.



In nature, a mineral called agate shows similar bright shades and bands of color. Scientists think that agate forms when gas pockets in the Earth's crust become filled with water rich in silicates (sand), and other minerals (copper, calcium, chromium, etc.). Eventually a soft gel forms, perhaps similar to the gel used in this experiment. Colorful ring structures develop from the

interactions of the dissolved minerals. The gel later hardens into stone.