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Flow Visualization

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Group Project #1

The purpose of this photo was to illustrate what happens when you slowly place a drop of dye into corn syrup. In our process of creating these images, we used 3 different types of dye with the corn syrup. Each type created a truly unique image. This phenomenon is called the Saffman-Taylor instability effect. This specific photo illustrates the fingering effect created by this phenomenon. To create this image we had to use the Saffman-Taylor instability machine. It is a machine that is made up of a sort of plexiglass table with a small hole in the center of it where you can inject fluid. It also allows you to have your light source directly under the fluid. In this particular image, we did not inject the dye into the corn syrup, we simply dropped it on top and watched while it slowly began to finger out. The actual process of creating this fingering was very interesting to watch.

I chose the image using the green dye. I thought it was pretty beautiful in itself as well as interesting. The fingering created the eyeball looking image. It was fascinating to watch this take place. When dropping the dye into the corn syrup we made sure to place it on top of the syrup instead of dropping from a high position. This allowed the dye to begin to finger with out much outside influence.

In this photo, we did not use a flash. The light underneath the liquids provided enough light to illuminate the image. The shutter speed was 1/250 and the aperture was f 6.3. The exposure was taken manually and the focal length was 80.00 mm. It was taken

with a Nikon Corporation, Nikon D50 camera. We took this image from all directions and angles but I feel this angle captured it the best. It was pretty dark in the room so I needed to lighten the image up a bit in Photoshop. I changed the contrast, which created almost a sort of glow to the image. I tried to sharpen in but it only made the picture grainy.

This project was interesting. I usually like working by myself to create images because I am very picky about the images I like. It was also hard being the only art major in my group because I felt myself asking question 85% of the time. I wish I could have just had a little more time with my group to maybe try to create even better images than we came up with. I found the image I picked to be very interesting, but I wish it was more vibrant.