

Robert Gray
Get Wet SP18
FILM4200-001
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For my first image, since I had effectively no photography or lighting experience, I focused on attempting to blend geometry with some sort of flow effect. Initially, I tried to make an olympic-themed “Bobsled drops on a cornstarch course”, but I was finding it very difficult to control the shapes and quality of the image, since it was almost entirely compositional and had very little to do with actual fluid flow. After experimenting with different fluids (soaps, oils, and some corn-starch/water), I settled on capturing the Saffman-Taylor instability (fingering) on a thin layer of dish soap, and the rope-coiling instability present when corn syrup was introduced. The geometry I chose was a circular glass bowl, similar in size to a petri dish, since it had little in the way of distracting contours, and was quite clear.

The image was captured from above, pointing straight down on the subject against a white trash bag backdrop. Due to difficulties with the tripod, I was unable to keep the camera aligned to the geometry I had set up, and some cropping was required to fix this. Fig. 1

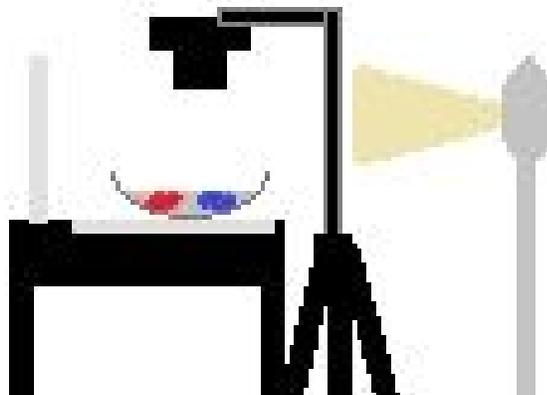


Figure 1. Capture Setup

The dish, which is approx 3" in diameter at the top, and 1.5" on the bottom. The base was covered in a layer of Kirkland dishwashing soap, then McCormick Red and blue dye were added, from ~2" above the surface, near the center of each half of the dish. After that, Karo Light Corn Syrup was poured into a spoon, which was used to drip the corn syrup across the center. The rope-coiling instability was present here, but as the fluid was not extremely viscous, it dissipated quickly into the water, and the horizontal velocity caused the looping effect between the two dye colors.

To Light the image, I used a bright white LED lamp, aimed a white sheet of plastic behind the dish. (relative to the tripod). This gave a nice light level, while remaining soft, and without any accompanying reflections. The camera used was a SONY ILCE-6300, placed approx. 1 foot above the dish, with an aperture F5.6, a focal length of 33mm and a 1/100 second shutter speed. With 0.3 eV of exposure correction. It was white balanced to the background, and an ISO of 2000 was used, as the region was fairly well lit. In post, some curves were changed to accentuate the colors, and a black border was added to emphasize the geometry.

I was not expecting this to turn out anywhere near as good as I think it did. Though I wish I had been more careful with the colors in the darker parts of the image, and some of the timing and flow effects, I think it has a powerful aesthetic. The color choice was also fairly arbitrary, though it certainly gives rise to certain political connotations. Other color combinations could have drastically changed the composition. I would like to further explore this combination of effects and geometry for "planetary" shapes, as I think there's lots of potential for interesting concepts here.