

Get Wet/IV 1
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1: Introduction

This image was created for the first project, Get Wet. The image that I have captured is of hot pink acrylic paint being injected into a clear jar of water, using a syringe. The intent of the image that I took was to capture the way that the paint fell to the bottom of the jar through the water, in hopes that I would be able to see strange formations with the way that the acrylic and the water interacted with each other. The final image was the second take, as the first paint that was injected went straight to the bottom of the jar and did not stay suspended in the water for long enough. Will Dietz helped me with the set up and capture of the image; he injected the paint into the water in the jar while I photographed it.

2: Set Up and Relevant Physics

The flow that is being captured here is a denser liquid (the acrylic paint) sinking in a lesser dense liquid (the water in the jar). The jar being used hold 16 fluid ounces and is about six inches tall. The paint glob is being acted on by gravity, causing the denser liquid to rapidly sink. Captured in the image is the inbetween state of floating and sinking. It changed quickly with time, and was only suspended in the water for about two seconds.

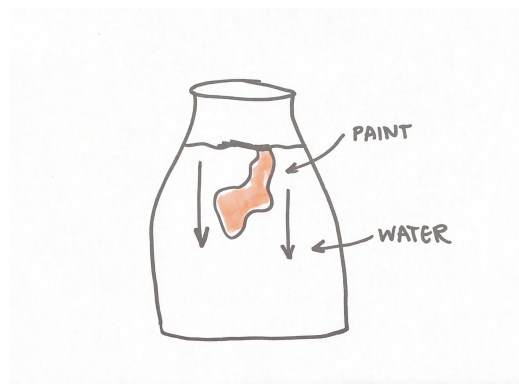


Figure 1: Sketch

3: Visualization Techniques

The visualization technique of this flow was using water based acrylic paint. The paint, in the color *Orange Soda*, is made by Modo Llama and for use on wood, glass, ceramic, metal, canvas, and plastic. The experiment was done inside, on a table top, and conducted in a Mason jar full of room temperature tap water, and was injected with the paint using a 1mL syringe. For the lighting set up, a 3-point LED Ikan light kit was used, with the color temperature set to 5600K for a cool-colored atmosphere. One light, the key, was set to 100% intensity. The second, a fill, was used at 50% intensity, and a kicker (back light), was used with 20% intensity. A white sheet was used as a backdrop and table cloth. See image below for set up.



Figure 2: Set Up

4: Photographic Technique and Choices

Shot on a digital (mirrorless) Sony A7iii, the jar that was photographed was about 6 inches away from the lens. The field of view was about 8 inches x 8 inches. The zoom lens that used to capture the final image was zoomed all the way into 70mm. Shot on manual, the shutter speed was 1/50, the ISO was at 100, and the f-stop was 5.6. The final image is 3938 x 1864 pixels, while the original is 6000 x 4000 pixels. For editing, all that was done

was an decrease in contrast by -8, and an increase in exposure by +0.42, in addition to cropping. See below for comparison of original raw image and final product.



Figure 2: Original RAW Image

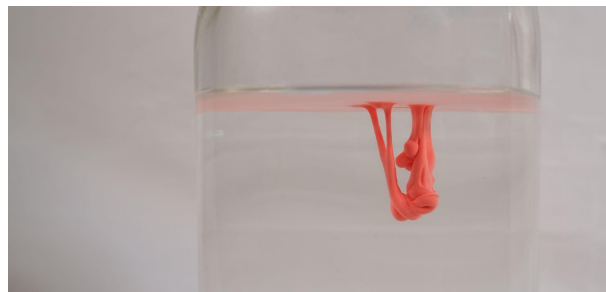


Figure 3: Cropped and Edited Final Image

5: Further Work

I really like how the image turned out. The soft background amplifies the “orange soda” color of the paint. I would like to understand the physics behind what is happening better, as I tackled this in more of a visual sense because that is my background. From what I do understand however, the fluid physics are shown in an artistic way. I would like to try different colors at the same time in the future, and to see what other strange shapes I can get.