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Flow Visualization
Group Project #3 Write-up

I was a lone wolf for this last project. Due to health and scheduling conflicts, I was unable to join the rest of my team for the experiment that we had originally discussed. For my own, revised option, I chose to do something that could be accomplished relatively easily. I decided to attempt a project using materials that I had left over from my "get wet" assignment, and once again, went back to my black-light.

The inspiration for this project came from a video I had watched in one of the special features of a DVD. Within the special features of *The Fountain*, a film directed by Darren Aronofsky, there was a video showcasing a series of macro-cinematography clips created by a Chemist named Peter Parker. Using a microscope with an added high-resolution recorder and a backlit petri dish, Peter Parker combined a variety of chemicals to create several interesting reactions. These images would become used later in the film for the visual effects of a futuristic space concept. Although I'm not a chemist and didn't have access to a plethora of chemicals, I did have some household liquids left over from the "get wet" assignment and was aware that they could react with each other in an erratic nature.

I began the experiment by first gathering the non-liquid essentials and bringing them into a windowless bathroom. I placed a medium sized Pyrex baking dish on a chair and placed the black-light as close to it as possible. I then proceeded to fill the dish with an unknown amount of both dish soap and bleach. Not the best experiment protocol, but it was more about just finding a look I was happy with. Once the lights were off (except the black-light of course), I dipped a dropper into a bottle of fluorescent blue paint and began to squeeze multiple drops. I squeezed at different frequencies to give a variety of reactions. I began filming as soon as I started noticing significant reactions within the liquids. For the filming I used my Canon 5D mark II with a mounted Tamron 90mm prime macro lens. The settings were at an F-stop of 2 (fully open on that lens) and a shutter speed of 1/700. The high shutter speed was chosen solely to get a crisper and sharper image of the ripples. The only problem with my setup was the way the camera was placed. Due to the way my tripod is setup, I was unable to get the lens to sit directly over and parallel to the liquid inside the dish. Instead, it was off set and pointed down at an angle. This made it impossible for the plane of focus to be completely flush with the liquid, thus making only a section of the liquid in focus. In all it was just a small price to pay, considering the footage came out so great.

This was a very enjoyable project, and I almost perfectly achieved what I was looking for in the intimidating footage I had seen in the DVD special features. I feel that the color is great, and the ripples give a nice touch to the whole clip. It must be noted that the clip is completely unaltered except for some minor trimming due to duration.