Get Wet Report

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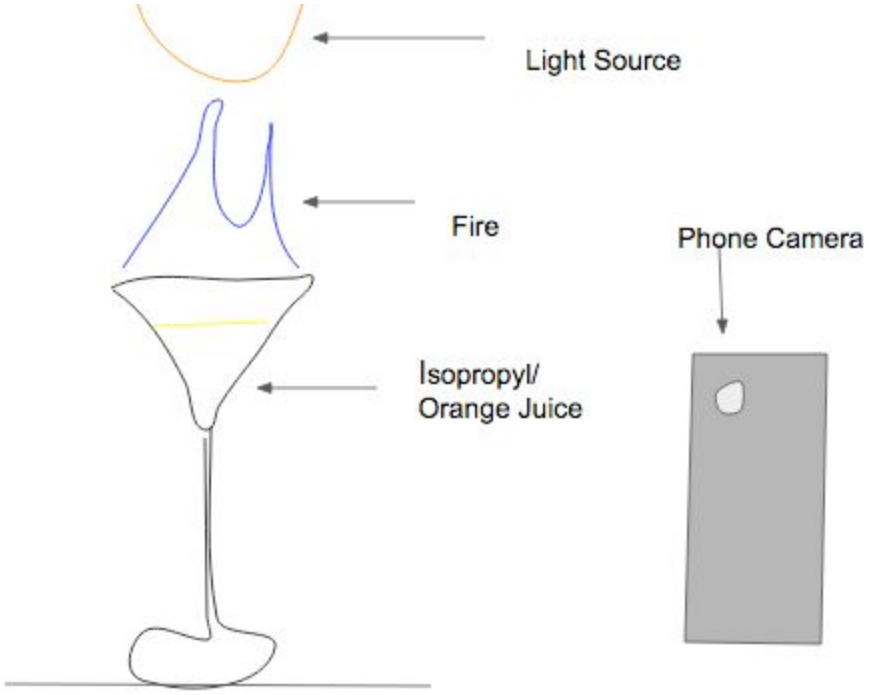
The project header corresponding to image shown in the title page is, ‘get wet,’ and that is exactly what our class was asked to do. We were instructed to get our feet wet using whatever means we desired to acquaint ourselves with fluid flow and the art of representing it. The assignment allowed us to start thinking about ways to capture different phenomenon and was an outlet to try out our first creative instincts. As with many first go’s, the setup and execution for this particular image was initially imperfect and took a few iterations to become what it is now. In addition I took advantage of post processing to account for beginner error and the limitations of both my environment and my equipment. Inspiration for this image was derived from the desire to work with fire, light and contrast. I toyed with the idea of igniting rubbing alcohol, while also giving the system control and color. These ideas led to a containment unit in the form of a martini glass which was aesthetically pleasing, and using orange juice to color the liquid and give the photograph texture. The black background of the stove was chosen for the lack of destruction, contrast and safety. To assist with the process of maintaining a safe controlled environment while also obtaining the picture I desired, I worked in conjunction with Christopher McFadden. Working as a team streamlined the process and gave us much more freedom as photographers to focus solely on the capture.

` The apparatus used to capture this image was simply a martini glass on a stove top. To capture the fire, and get the color in the stem the overhead light on the stove was used. Behind the martini glass a black bar mat was placed. This gave the image a completely black backdrop for consistency. The rest of the lights in the room were turned of in the name of illuminating the fire and reducing reflective noise. Finally the image was taken head on with the camera at stove level to give the most accurate depiction of the systems. The flow is a basic flame created by igniting an accelerant, this creates a basic symmetric laminar flame flow. The glass was about four inches in diameter at the mouth and the fire stretched close to three inches off the face of the surface.



The overall effect and impact of this image was a direct result of the flame coming off of the glass. The isopropyl used was a brand new bottle of the walgreens brand variety and made up close to half of the mixture. The orange juice used was tropicana and made up the other half. The overhead light used to illuminate the system was relatively dim, which was useful in keeping the image from being overexposed. There was little to no outside light as all the curtains were closed and lights turned off. The only other light source was that of the fire itself.

The photograph technique was relatively simple. Due to technical difficulties, I resorted to using an iphone camera. As a result I was subject to the max shutter speed that the phone had to offer. I was relatively pleased with how the photo turned out; however, there is some obvious blurring that perhaps wouldn't have been present with a faster speed. Once again the image was taken head on with the lense about three-four incase above the surface of the stove. Due to the limitations of the phone the final image had a great deal of post processing. This involved turning up the contrast, reducing the glare and doing a great deal of blemish removal and cropping. In the initial image there was a burner present that was removed with a blemish tool. Another distracting element was glare on the black metal surface of the stove from the overhead

light. I found a tool that could turn down the look of the glare, helping preserve the glass as the focal point of the image. The original image is shown below for perspective.

This image reveals that a simple alcohol, orange juice, and martini glass system can create something quite astonishing, and that the powers of modern cameras and post processing can give even the most seemingly simple flow display depth and complexity. I really enjoyed how the contrast of the orange juice and the fire were so striking against the black background and felt the overhead light gave the entire image an interesting glow. If I were to recreate this image I would focus on fine tuning the process and acquiring a better camera. I believe with a bit more post processing I could achieve a completely uniform black background and with a better camera I could get a more accurate image more telling of the fluid properties. In the future it would be interesting to do on a larger scale, with more orange juice, in a giant martini glass.

Resource

https://www.sciencedirect.com/science/article/pii/S0307904X13003326