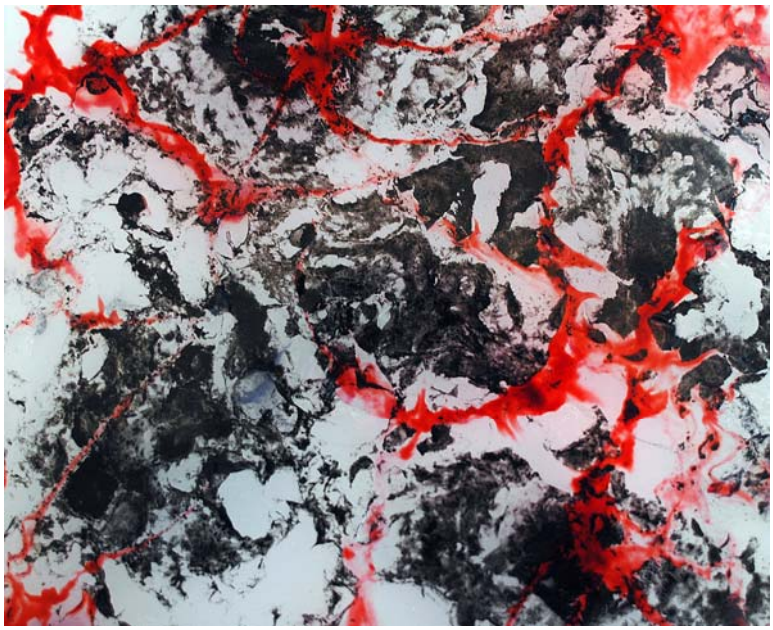
Group Project #2
"Marbling"



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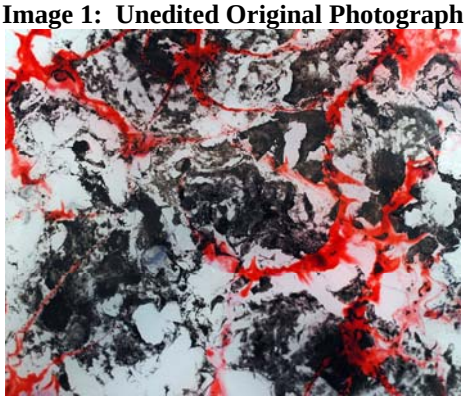
Group Project #2 - "Marbling"

"Marbling is the art of printing multi-colored swirled or stone-like patterns on paper or fabric. The patterns are formed by first floating the colors on the surface of a liquid, and then laying the paper or fabric onto the colors to absorb them. Marbling is sometimes still called by its original Turkish name, ebrû.[1] Turkish Persia is where the technique was first widely used in printing and decorative applications.

Creating an interesting and visually appealing ***marbling*** photograph was the intent of Group Project #2. The marbling technique was not as important as the final photographic results. However, the final image created was abstract in nature and visually interesting in content. The final edited image may be noted by ***Image 1***.

Image 1: Unedited Original Photograph



BACKGROUND INFORMATION:

The primary principle of marbling is the floating of a less viscous and less dense fluid on top of a more viscous and denser fluid. In this particular project, the marbling technique was created through the use of common household items combined via a simple procedure. The more viscous and denser fluid consisted of a basic mixture of water and gelatin. The gelatin/water mixture was comprised of 4 cups of hot water and 1.2 teaspoons of gelatin. The mixture was placed in the refrigerator for ~24 hours to solidify. Once the desired consistency of the water/gelatin mixture was obtained, ~6 drops of Sanford Higgins Waterproof Black Ink and ~6 drops of red food coloring were added to the surface of the water/gelatin mixture. The waterproof ink and red food coloring were allowed to freely float upon the surface of the water/gelatin mixture. At that point, a wooden chopstick was used to disturb the suspended artificial coloring about the surface of the gelatin/water mixture. The suspended artificial coloring was stirred until a desired marble pattern was achieved. Once the desired marble pattern was obtained, a photograph was taken recording the results.

PHOTOGRAPHIC TECHNIQUE:

IMAGE SUMMARY:

- Field of View: ~ 8” x 8”
- Image Size: 1800 x 1459 Pixels
- Distance from Object to Lens: ~ 18”
- Lens Focal Length: 24 mm
- Type of Camera: Digital – Nikon D70
- Exposure Specifications
  - Shutter Speed: 1/40 sec.
  - Aperture (f-stop): F/2.8
  - Image Resolution: 2 MP
- Film Type & Speed: ISO-400
- Digital Manipulation: Minor Contrast, Focus & Sharpness Enhancement
- Printing: None
- Lighting: Mixture of fluorescent overhead lighting & ambient side sun lighting

APPARATUS SET-UP:

The bowl containing the fluid mixture was placed on top of a dinner table. The table was placed in close proximity to an exterior window that provided natural sunlight filtering through the window. In addition, artificial fluorescent lighting approximately ~6’ overhead provided nondirectional lighting of the subject. The camera was placed on a tripod ~1.5’ above the subject and multiple photographs were taken of the subject. A simplified schematic of apparatus set-up is noted by ***Figure 1***.

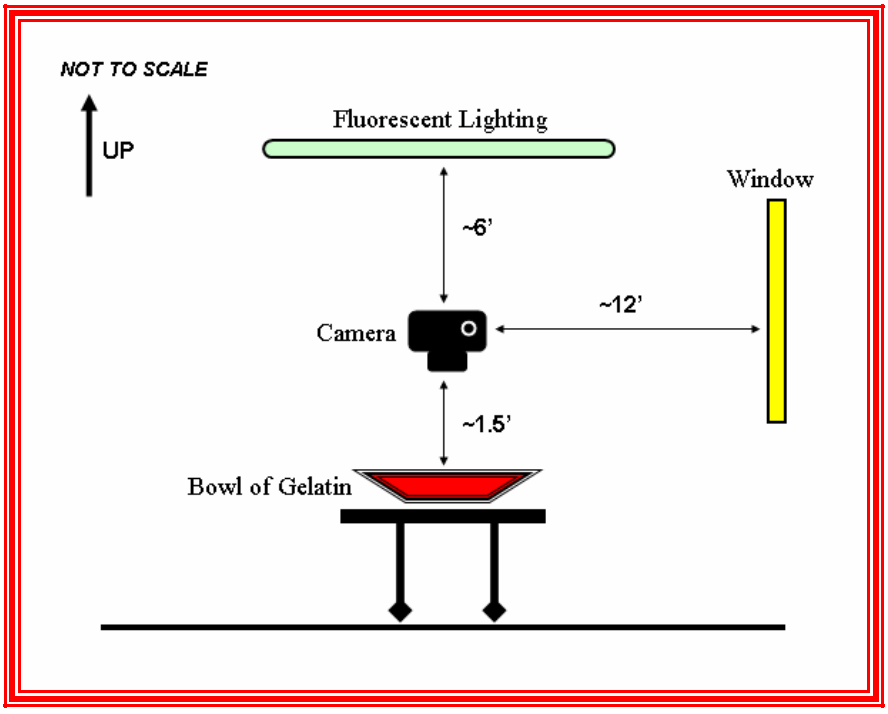


FIGURE 1: Apparatus Set-up Schematic

IN SUMMARY:

Improvements and/or differences could have been achieved through the use of different artificial colorings (i.e. blue, yellow, green). Also, varied disturbance patterns would have created different marbling patterns. However, these improvements would have been completely subjective of the viewer.

Conducting the procedure was interesting and provided a great learning experience. The marbling technique was simple, yet effective in creating a lasting image. The basic physics of a less dense fluid floating on top of a more dense fluid was demonstrated adequately. In addition, a balanced blend of artistic creativity and physical phenomena was joined into a great photograph. Hence, the purpose and rationale behind Group Project #2 was realized.

REFERENCES:

[1] http://members.aol.com/_ht_a/marbling/WhatisMarbling.htm. [Accessed: April 4, 2006]