



Photogenic Fluids III: Cornstarch as Canvas*

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Oobleck, mixture of cornstarch and water, is a shear thickening liquid everyone can experience with in their kitchens. This characteristic makes it a fun liquid to play with. Here, oobleck was explored as a medium on which to create visually engaging patterns, hence the word “canvas” in the title.

Three parts cornstarch and one part water, on volume basis, were mixed in a bowl and poured onto an acrylic sheet (used for ease of cleaning and reuse). Food color drops were then deposited on the oobleck with a hypodermic needle. Some spreading of food color took place but it was not too rapid. A variety of objects such as toothpick, knife blade, etc. could be used to drag the colored areas around and to mix. A drinking straw with one end cut at an angle was used to scoop out small amount of uncolored oobleck to add on top of the colored areas, creating a variety of patterns. The images show examples of limitless possibilities; steps taken in creating each image are outlined in its caption.

Also, of interest is a similar method but in reverse order, the result of which is shown on the last image (indicated by an orange diamond). Here, the food color is deposited onto the acrylic plate, and then the oobleck is poured on top of the food color. Almost immediately fingering appears, creating a fractal pattern.

* This work was inspired by Bronwyn Hayworth’s “Get Wet” project, Flow Visualization Course, University of Colorado-Boulder, 2004.