In this article, the focus is on the cleaning of an early 20th century bust of Samuel Gompers with an altered methyl cellulose poultice mixture. As with the conservation of any stone, the conservators here are primarily trying to restore the former color and finish of the marble without losing pieces of it and without mechanically deteriorating the stone with their own materials.

According to the article, poultice cleaning was a popular method of cleaning stones in the 1980s. This was a successful method of cleaning because it kept the cleaning materials close to the contaminants long enough to allow them to be absorbed into the cleaning materials.

This marble bust was created by Moses Dykars in 1924, the same year important American labor union leader Samuel Gompers passed away. His bust was positioned close to the entrance of the cafeteria in the National Portrait Gallery.

This bust was said to display a very high polish and a rough, etchy finish. After time of neglect, however, and the positioning of the bust, it was soon exposed to soiling. The National Portrait Gallery had the bust at a height that encouraged visitors to touch it and come in close contact with it. So as it was, once the sculpture was brought in to the Conservation Analytical Laboratory in 1986, just sixty two years later, the bust head was covered with thick layers of grey to dark brown grime and grease. Overall, the stone had a yellow tint.

In the first cleaning tests, saliva dampened swaps cleaned off some of the filth that was on the surface of the marble. Next, acetone, ethanol, benzene and trichloroethylene were swabbed on. Eventually, one side of the face of the bust was partially cleaned but the marble was left looking blotchy. The conservators realized that the film left by the things they were applying to clean the marble was leaving residue and crystals were falling off the marble along with it, so they tried to prevent that from happening. They found that fumed silica was a successful additive. It offered a clear gel and the when it was dry it left no residue. The conservators then tried to reduce the adhesive qualities of the film with plasticizers. A chemical company suggested that the conservators use a methyl cellulose mixture. On both the rough and polished marble surfaces, the methyl cellulose mixture and the fumed silica effectively cleaned the surface while keeping the crystals intact.

Ultimately the whole object was cleaned with Methocel A4C, ammonium hydroxide, propylene glycol, and fumed silica. Four to six jars of the combined materials were needed to coat the marble sculpture entirely. The white and mostly elastic mixtures were then applied over the entire stone surface. This mixture dried at room temperature and had a RH of 42--44%. Three more coats were put on over the course of a week. Each poultice was said to require about two whole days to dry to a flexible film. After the poultice had dried, it was then sprayed with deionized water to make the film easier to remove. Once all the film was peeled off, the stone looked much cleaner, although, the areas that had the heaviest contamination of the entire marble piece were still pretty grey. So a second and third poultice were applied for the overall best cleaning.

This article concluded with a successful cleaning of Samuel Gompers bust. Overall, I found this process very interesting and was glad to have found the article. In a video in class, we saw an example of poultice being applied and I wondered just how it worked. It almost looked like a magical wax. My only question was about the amount of poultice that was applied. If the application amount was variable why did it look like they put so much on, did it really matter if each wet poultice layer was an 1 inches or ¾ inches? Could it have been much less.

A FRESH FACE FOR SAMUEL GOMPERS: METHYL CELLULOSE POULTICE CLEANING

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http://cool.conservation-us.org/jaic/articles/jaic28-01-002.html