

## Notes on Coated Japanese Paper for Opaque and Sympathetic Fills

### ABSTRACT

Japanese paper is ideal for most of the mending that is needed on a book. When there are missing areas, however, Japanese paper is usually too transparent. One common method of toning the paper is to use acrylics, but the resulting paper may not allow for a suitable water-torn edge. Papermaker's clay and calcium carbonate can be applied to sheets of Japanese paper to provide a more opaque and sympathetic fill.

### CLAY-COATED JAPANESE PAPER

Book conservators work with a variety of materials to meet the task at hand. Japanese paper meets most mending needs because it is thin, strong, and transparent. That transparency is ideal in most cases, except when an area is missing and needs to be filled, such as the corner of a book leaf. While one or two layers of Japanese paper may be the correct thickness, the mend is still too transparent. In order to match the original paper, the Japanese paper may be toned with acrylics, but the resulting paper does not readily water-tear for a suitable mend.

While the author was working on a special book in which many fills were required, this lack served as an inspiration: since papermakers normally add clay and/or calcium carbonate for opacity when making paper, could a mixture of these substances be added to water and then applied to a finished sheet of Japanese paper? During experimentation, 20 g of kaolin clay and 10 g of calcium carbonate, plus a small amount of watercolor, were mixed with 200 mL calcified distilled water. The solution was then carefully sprayed onto Japanese paper using a Sure Shot air-pressurized atomizing sprayer. Since the solution was quite dilute, several applications were needed to avoid runs and drips, and this also helped with the uniformity of the finished product. In the initial trials, only the rough side of the paper was coated about five times. The

entire process, as well as the proportions of the mixture, can be further refined.

The resulting coated paper can be water-torn for an opaque and sympathetic fill (fig. 1). Surprisingly, neither the coating nor the watercolor moves or bleeds during water tearing. After attaching one fill layer using wheat starch paste, a second layer can be added with dilute paste, and the clay coating is sized and further stabilized. If the color is not quite right, more watercolor can be added without bleeding. The result is a Japanese paper fill that is much more compatible with the original paper (fig. 2).



Fig. 1. Uncoated and coated Japanese paper with a water-torn edge



Fig. 2. Left: a fill made from two layers of uncoated Japanese paper laminated with dilute wheat starch paste. Right: a fill made from two layers of the same Japanese paper, coated with a solution of kaolin clay, calcium carbonate, and watercolor prior to mending

## MATERIALS

- *Kaolin clay and calcium carbonate* are available from Twin-Rocker Papermaking Supplies, Brookston, Indiana ([www.twinrockerhandmadepaper.com](http://www.twinrockerhandmadepaper.com)).
- *The Sure Shot atomizing sprayer* is available from McMaster-Carr Industrial Supply ([www.mcmaster.com](http://www.mcmaster.com), cat. #7054T7).
- *Finished sheets of coated paper* may be obtained from the author.

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