

The Joy of Soy

BY JOHN MARSHALL

SOYMILK: A TEXTILE ARTIST'S BEST FRIEND

- Soymilk acts as a sizing and prevents wicking, allowing fine detail in hand painting.
- Soymilk converts water-soluble pigments into permanent, colorfast pigments.
- Soymilk works equally well on silk, wool, linen, rayon, and all natural fibers.
- Soymilk is all natural and chemical free, making it an environmentally safe medium.
- Soymilk makes fabric resistant to soil and wrinkles.

Most of us are familiar with soybeans.

We enjoy them in the form of tofu, nuts, crackers, soy sauce, and *edamame*—the in-the-pod beans served with coarse salt in many Asian restaurants. But did you know that soybeans could also be a textile artist's best friend?

At age 17, I set off for Japan, my newspaper delivery earnings and a plane ticket in hand. There I began my lifelong exploration of the world of Japanese textiles. Because Japan is a country of few natural resources, its people have become adept at using available materials in every conceivable way. Soybeans are one such resource.

I learned to use soymilk as a sizing, which allowed me to draw whisker-fine lines on silk with no wicking (bleeding along the weave of the fabric). I was also taught to use soymilk as a binder for dyes and pigments; it securely adheres the color to any natural fiber and prevents crocking and bleeding.

After 30 years of painting and dyeing textiles, I have come to appreciate what astonishing uses soybeans offer fiber artists. I have refined the process for my own purposes and have found that soymilk is also ideal for treating fabrics to make them soil and wrinkle resistant. Not bad for a humble bean!

SUPERMARKET SOYMILK

Ready-to-drink soymilk is pasteurized and contains flavors and additives as well as active cultures (bacteria) to aid digestion. Homemade soymilk, on the other hand, is pure and is the only kind that should be used for this process.

Treating Fabric with Soymilk

To help your fabric resist soil and wrinkles, or to size your fabric in preparation for painting it, make enough soymilk to completely submerge and saturate the cloth. One gallon will easily treat one yard of fabric.



ABOVE LEFT *Felicitations*; soymilk sizing on silk, painted with soymilk and natural pigments, machine-quilted whole-cloth quilt.

ABOVE *Ship at Sea*; soymilk sizing on silk, painted with soymilk and natural pigments. All fabric paintings by the author.

Prewash and dry your fabric. Dip it into the soymilk and knead it, working the liquid into the fibers. Gently wring small pieces of cloth, or remove excess water from larger pieces in the washing machine's spin cycle. Smooth out any wrinkles and hang the fabric to dry. I do not recommend starting this project on a humid day, as the soymilk might sour. The fabric should air-dry in a couple of hours. Once the fabric is completely dry, iron it and set it aside to cure.

During curing, or oxidation, oxygen molecules in the air permanently bond the soy protein to the fabric's fibers. The drier and warmer the environment, the better. So how long do you need to cure your fabrics? I cure my fabrics for an average of three months, but don't let that deter you. Even a few days of curing will be helpful. If you are quilting with your fabric, it will continue to cure as you construct your piece. Just wait to wash your project for a couple of months. ▶

Making Soymilk

1 Soak ½ cup of soy beans (available at supermarkets, health food stores, and feed stores) for at least three hours. The soybeans will double in size.

2 Rinse the soybeans in a colander. Place the clean soybeans in a blender and fill it three-quarters full with water. Leave enough room at the top of the blender to keep the mixture from overflowing. Turn the blender on high or liquefy and let it run for about one minute. The liquid will froth on top.

3 Lay a clean, damp handkerchief in a colander that has been placed over a mixing bowl. Pour the soy/water mixture through the handkerchief.

4 Pull up the edges of the handkerchief and wring out the liquid. The liquid that flows into the mixing bowl is soymilk, and the vegetable matter remaining in the cloth is *okara*.

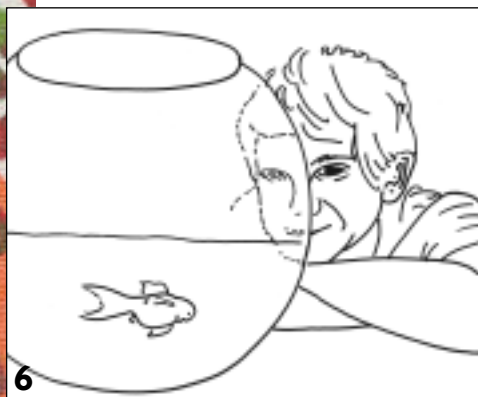
5 Return the *okara* to the blender and add more water to repeat the process. The *okara* will start to look like wet sawdust. You can usually get three “pulls” of soymilk from one batch of beans, with each batch a bit thinner than the last. Mix them until you have a consistency similar to or a little thicker than two-percent milk. Take care when adding the third pull that you don't overthin the soymilk. If your final mixture seems thick, add water. This will yield about four to five cups of soymilk.

HURRAH FOR OKARA!

Don't throw it away! Add okara (leftover soybean crumbles) to meatloaf, spaghetti sauce, bread, and even cookie dough without altering the flavor or texture.

Google “okara” to find websites devoted to recipes that call for this excellent source of fiber.





Painting with Soymilk


To begin, sketch your design (Fig. 6). Insert a piece of fabric that you have treated with soymilk and have allowed to cure in an embroidery hoop. Stretch it taut. Evenly coat the entire area with soymilk. It should be completely moistened, but not the least bit drippy. This will size the fabric, making the surface stiff and easy to paint.

Gather a range of regular artist-quality watercolors in tubes, a pointy brush, and some flat-bristled brushes of various sizes that you are familiar with using. I prefer a 00 paintbrush and flat Japanese *surikomi* brushes, shown here, which are especially useful for shading.

Thin your watercolors with soymilk instead of water. The soymilk will act as a binder to make the watercolors permanent. Paint on the fabric just as you would on watercolor paper (Fig. 7). The soymilk sizing you applied to the surface will keep the colors from wicking, allowing for crisp lines as well as for areas of more blended, flowing color (Fig. 8).

Once you have finished painting, set the fabric aside in a warm, dry spot for at least two days to allow the soymilk to cure. Then gently hand wash it, swishing it in the water rather than scrubbing it, and blot out the excess water. Place the damp fabric right side down on a clean terry cloth towel. Set your iron on high, with steam, and float it just above the surface of the fabric. This will help the fabric dry, and it will restore it to its original unstretched texture.

When it's completely dry, your fabric will be a bit stiff. Pull gently along the bias in both directions to put the bounce and drape back into the weave. Paint a whole-cloth scene, or cut around smaller paintings and piece or applique them together to create a quilted work (Fig. 9).

The sky is the limit in terms of how you employ your own creativity to fashion new and enchanting works. Enjoy the adventure! 

JOHN MARSHALL is an American fiber artist who specializes in Japanese textile dyeing and painting techniques. He travels internationally to teach and lecture, and he is known for his unique wearable art creations.

BUDDHIST TEXTILES

Many believe that quilting came to Japan from the West. However, Japan has a long history of patchwork, both as an art form and as a way of preserving and treasuring textiles. Buddhism was introduced to Japan in the sixth century. To learn humility, young monks subsisted only on the offerings of passersby. This included not only food, but clothing as well, so any scrap of fabric was a treasure. The scraps that made their way into the novice monks' hands were usually worn and threadbare, but each offering was accepted with piety. When enough scraps were collected, they were purified, dyed, and pieced into robes, following very set patterns.

As the political structure of Buddhism gained power, it attracted wealthy patrons, who donated high-quality textiles to a less-than-humble priesthood. Many women devoted themselves to creating exquisite textile adornments for both temple and home; a great many of these were pieced. In *kiribame* (traditional Japanese piece-work), we find a feature not often seen in Western quilting: hand-painted details.



ABOVE LEFT Royal Procession; natural pigments and vegetable dyes on *bashoufu* (banana fiber).

ABOVE RIGHT Mums, Maples, and Aoi Leaves; soymilk sizing on silk, painted with soymilk and natural pigments.

LEFT Strangers Baring Their Souls on a Park Bench; soymilk sizing on linen, painted with soymilk and natural pigments.

ALL PHOTOS COURTESY THE AUTHOR