

# Sgraffito Guide

by Wayne Bates

## Goal

Learn to apply layered surface engobes and use the sgraffito surface decoration technique on functional work.

## Materials

- fine-grog clay body-coarse grog clays lead to jagged cuts and edges to carved lines.
- colored engobes
- small loop or ribbon carving tools
- brushes for engobes
- sponges
- glaze sprayer or airbrush (optional)
- wax resist (optional)

## Other Terms

*sgraffito* Derived from the Italian word *graffito*, a drawing or inscription made on a wall or other surface (*graffito* also gave us the word *graffiti*). *Graffito* is past participial of *sgraffire*, which means “to scratch.” So the word *sgraffito* basically means to scratch and create a graphic or an image. In ceramics, *sgraffito* is a technique of ornamentation in which a surface layer is incised to reveal a ground of contrasting color.

*engobe* A mixture of clay, frit, modifiers, fillers, and colorants, which is used to coat the surface of a leather-hard, dry or bisque-fired clay object. For *sgraffito*, use a recipe made to work on leather-hard clay. Ball clays are used for engobes because they are the most plastic clays and shrink the most allowing more room in the recipe for non-plastic color, frit, modifiers and fillers. Frit is used to bind the coating to the surface and to increase the interface with the pot and the glaze. Wollastonite is used to add calcium so the chrome-tin colors will work, and flint is used as a filler and stabilizer for colors that flux the mix. I mix the engobes thoroughly



and screen them through an 80-mesh sieve. Most of my colors come from commercial glaze stains although not all commercial stains will work, but if you think of engobes as being closer to glazes than slips, additives can help produce the right colors. Changes in the frit affects how fluid an engobe is and how it works with the glaze. It can also produce a vitreous, glazelike surface. Changes in the amount of ball clay will make the engobe more or less plastic and change whether it goes on very wet pieces or bone-dry pieces.

## Steps

- 1 Start with a leather-hard clay vessel or sculpture.
- 2 Apply colored engobes, either by spraying or brushing. The engobe sets quickly because the leather-hard piece can absorb some water, but too much engobe and the piece can collapse. If the engobe is too thick, it makes the color and the glaze crawl. Tip: If using a sprayer, you can practice spraying with weighted down paper

plates. Your goal is to cover the plate smoothly with no bare spots and no dusty areas.

The four colors shown here (black, french green, chartreuse and crimson) are applied from dark to light (*figures 9–10*). The spray adds water to the piece and it must dry to the leather hard state before it can be carved. When dry enough, store the pieces on cloth on top of plastic, and place cloth over them to prevent condensation from the plastic marring the color (*figure 11*).

- 3 Allow the piece to dry to leather hard again.
- 4 Plan your sgraffito design, and begin by carving test pieces. Use a rubber-tipped air tool and/or a soft cosmetic brush to blow or brush off the cuttings as you work. The cut pieces are still moist enough to stick if you touch them to the surface, so they should be removed frequently. You can apply a thin coat of wax resist to protect light-colored areas from dark cuttings while you are working. The wax resist will burn off in the bisque firing.
- 5 Carve your design through the engobe, starting with lines and outlines, then moving to larger areas.

On the example shown, the center spiral and circle were created first after setting the piece on a foam rubber chuck on the wheel (*fig. 12*). All

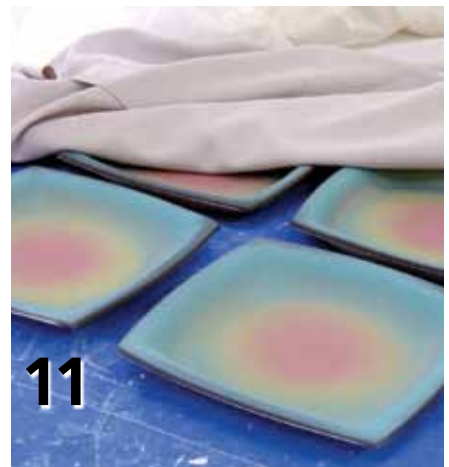
the other lines were done freehand on a banding wheel (*fig. 13*).

The scraping of the larger white spaces was done last, when the piece is even harder. Try to take off only the layer of color, rather than scraping into the clay (*fig. 14*). Use the the tool tip to make a sort of ditch that you can scrape to or from to make the larger white areas. Use the flat side of a metal rib, held vertically and dragged across the surface like a plane to make the larger cuts.

There will be some edges that can be felt, and glazes will break away from these edges, but the glaze will fill in to make it smoother than when cut. Small nicks and cuts can be patched, but the spray overlaps are very hard to color match, so it is best to avoid mistakes! When almost bone dry, use 0000-grade steel wool to lightly smooth some of the cuts and to remove small bits of color.

Cross-hatching is another way of exposing the white of the porcelain and is done with a serrated-edge tool (*fig. 15*). I add black dots of engobe using a squeeze bottle. When all the carving is done, the piece is air-dried then bisque fired, then a clear satin matt or a shiny glaze is sprayed on the front and solid color glazes on the back. Allow the piece to dry, then bisque fire.

## Spraying Engobes



Use an automotive-detail-type spray gun to apply engobes and glazes. It has a smaller fan size than the full-size gun, has good volume and is much faster than an airbrush. It's a high volume/low pressure (HVLP) gun and it produces less overspray. Use a large HVLP spray gun for the cover glazes because of its high volume.

6 Glaze using a transparent glaze. In the examples shown here, a matt and a shiny glaze cover the engobes on the face of the pieces and these two glazes are “color friendly.” To get as many colors as possible, the glazes you use have to work with the chrome-tin colors, i.e., the reds, pinks

and purples. The molecular recipe has to have three times more calcium than boron for these to work.

*Wayne Bates lives in Murray, Kentucky, where he has his studio and gallery. For more information on his work and his processes, visit his website at [www.waynebates.com](http://www.waynebates.com).*

## The Sgraffito Process



Place the platter on a foam rubber chuck on the wheel and create the center spiral as the wheel turns.



Move the platter to a banding wheel and work freehand.



Scrape off large areas last using the flat side of a rib.



Crosshatching is done with a serrated tool.

