

Scratching



A Guide to Sgraffito

by Wayne Bates

The word *sgraffito* is 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.

I use *sgraffito* to get a clean line without masking or rulers, and I do more cutting than scraping. I use a handmade tool that is thin and cuts smoothly (see box, page 27). I cut when the piece is stiff leather hard, which makes straight lines possible. If the piece is bone dry, the cut will be jagged and brittle. If the piece is too

soft, the tool raises the edge of the cut and makes a higher ragged edge.

If your clay has grog in it, or anything coarser than fine sand, you won't get a smooth cut. I use a rubber-tipped air tool and a soft cosmetic brush to blow or brush off the cuttings. The cut pieces are still moist enough to stick if you touch them to the surface, so they should be removed frequently. You can use a thin coat of wax resist to protect light-colored areas from dark cuttings. The wax resist will burn off in the bisque.

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.

the Surface



Sgraffito, the cutting through of one color layer to expose the underneath color, is an ancient technique. Wayne Bates has mastered the technique and provides tips to achieve successful results. Pictured above is one of his 10-in. square slab platters.

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.

I use a matt and a shiny glaze to cover the engobes on the face of the pieces and these two glazes are what

I call “color friendly.” To get as many colors as possible, they 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. They have that ratio and will produce the right color with all my engobes. I do use barium for what it does for the colors and for the matt. The potential problem with it has to do with the heavy metals and the possibility of leaching. From what I can find out, if a glaze has less than 15% barium in the percentage composition, it will not promote leaching. From the tests I have done, the glazes that I now use do not promote leaching when used over the engobes. I do use a liner glaze for liquid containers and I don’t use the solid color glazes on eating surfaces.

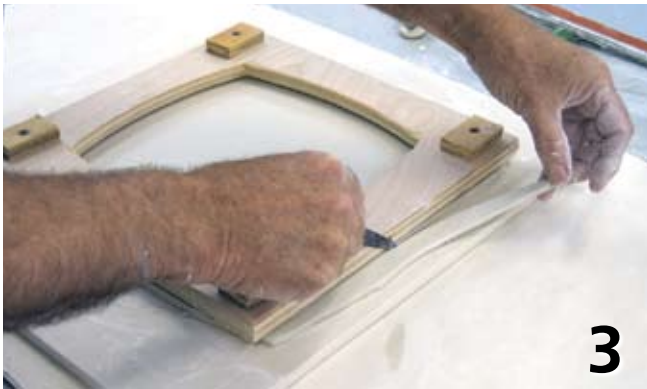
PROCESS: Making a Platter



Construct a form from $\frac{3}{4}$ -in. plywood. Note: The feet can be seen in fig. 3.



Smooth a slab of porcelain on both sides with a spray of water and a squeegee.



Place the form upside down on the slab and trim it.



Flip the slab over.



Slump the slab into the plywood by slamming it on the table until it takes the shape of the form.



Trim the slab again to approximate final dimensions.

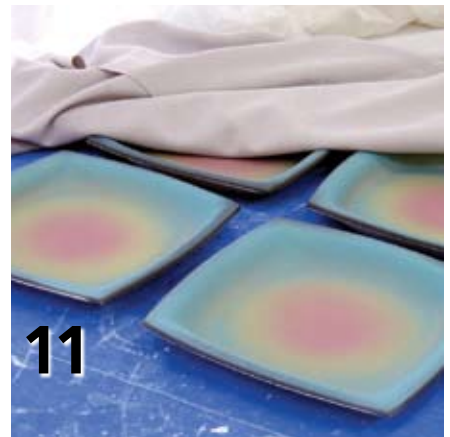


When the platter is leather hard, trim the edges and round them using a flat rasp.



Bevel the edges with a small rib and smooth them with a moist sponge.

Spraying Engobes



I 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. I use a large HVLP spray gun for the cover glazes because of its high volume.

I spray very wet, as if I'm pouring on a small stream of the glaze or engobe on the piece. 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. Set the fan for a tall oval and overlap the spray by 50% with the piece on a banding wheel turning smoothly through the spray. Tip: You can practice spraying with paper plates and should be able to cover the plate

smoothly with no bare spots and no dusty areas.

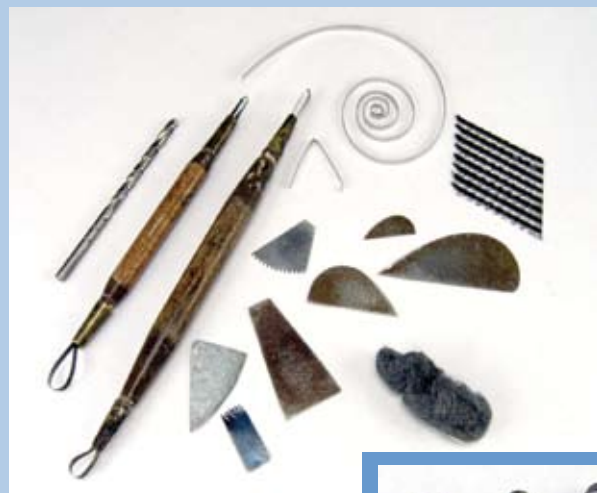
The four colors of this color set are Black, French Green, Chartreuse and Crimson and are applied from dark to light (figures 9–10). The spray adds water to the piece and it must dry to the leather hard state before it can be carved. When dry enough, store the pieces on cloth on top of plastic, and place cloth over them to prevent condensation from the plastic marring the color (fig. 11).

CAUTION:

Overspray is hazardous. The engobe spray contains silica, which can be harmful if inhaled. Wear a mask, and make sure your booth has an exhaust system.

Tools

My sgraffito tool tips are made from the main spring of a pocket watch. The spring metal is thin and strong, doesn't have to be sharpened and keeps the same feel as it wears away. To make the tip, cut a piece of spring, heat it with a small torch and bend it to the shape you want. A small rounded point is used for the line cutting tips, and a broader rounder tip for large cuts. Glue the tip with Elmers glue into the brass ferrel of the trimming tool and allow it to harden. Lightly heating the ferrel softens the glue and the ferrel can be removed and another tip glued into the tool. For ribs, cut them with tin snips from sheets of metal and flatten the edges, making two square edges for scraping (do not sharpen the edges). You can also cut serrated-edge ribs with the snips.



Above: Assorted tools used in sgraffito.

Right: Detail of trimming tool with ferrel removed and watch-spring cutter formed to desired contour.



The Sgraffito Process



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



13 Move the platter to a banding wheel and work freehand.



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



15 Crosshatching is done with a serrated tool.

First I create the center spiral and circle using a foam rubber chuck on the wheel (fig. 12). All the other lines are done freehand on a banding wheel (fig. 13).

The scraping of the larger white spaces is done last, when the piece is even harder. I try to take off only the layer of color (fig. 14). I use the the tool tip to make a sort of ditch that you can scrape to or from to make the larger white areas. I use the flat side of a rib 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. •

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.

