

Pottery Making

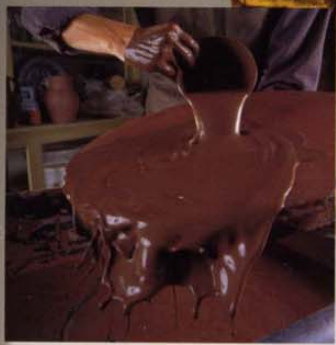
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Illustrated

Your Resource for Ceramic Techniques



Juggling a
Marbled Dish



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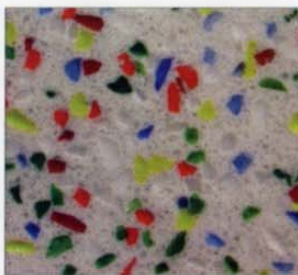
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Slipware Marbleizing

BY MICHELLE ERICKSON AND ROBERT HUNTER



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Ceramics in America, photographer,
Gavin Ashworth, NYC.

Left: Marbled dish, Italian slipware, ca. 1620-1640 (from the Chipstone Foundation collection). Right: Dish, Staffordshire or Midlands, 1720-1750; slipware, 13¾ inches in diameter (Image courtesy of the Colonial Williamsburg Foundation).

For thousands of years, potters in many cultures have used slip or liquid clay to create decoration. The technique was elevated to an industrial level in seventeenth-century Staffordshire, England where potters produced a wide variety of dishes and hollow wares for the international market. American archaeologists unearth English slipware fragments in prodigious quantities from seventeenth and eighteenth century historical sites. Contemporary art potters have also found inspiration in these traditional English slipwares, popularized by the work of Bernard Leach and his students.

The creation of marbled patterning where two or more colored slips are laid down and manipulated to produce a variegated appearance is among the most common slipware decorating techniques. The English technique of marbling may have had its origins in the early seventeenth-century marbled slipwares of Northern Italy (*above left*). Early American slipware potters working in many parts of the colonies also employed marbleizing methods in decorating their wares (*above right*).

How It Works

Gravity and centrifugal force are key elements for inducing the movement or flow of the slips during the marble-

izing process. The term “joggling” is used to describe the physical act of controlling this movement which requires very specific, and somewhat awkward looking, body and arm movements. The degree of aesthetic success is directly linked to the skill of the potter in controlling the flow of the slips. It is interesting to note the words of Bernard Leach who suggested turning slip-trailing mistakes into marbled decoration: “When one or more slips have been *unsuccessfully* [emphasis added] trailed over a wet background, . . . it is sometimes a good plan to try for a marbled effect by violently shaking and twisting the board upon which the clay rests.” Leach’s assertion implies that the mixing of two or more colors of slip to produce marbled patterns seems a fairly random and haphazard process but the opposite is true. It actually requires a thorough mastery of the materials and physical control of the slips.

Understanding the nature of slip is important as its properties can vary from one extreme to the other. When using slip, the clay particles tend to fall out of suspension fairly quickly so that the potter needs to frequently stir the solution as it has a very short working life. As soon as slip comes into contact with a drier surface, it begins to stiffen immediately. It is analogous to working with molten glass. Unlike glass though, slip can not be “reheated” or remoistened. A mistake made in applying a slip means living with it or wiping it off and starting over.

Tools, Techniques and Materials

The essential tool needed for slip trailing and marbling was (and still is) the slip cup. The trailer itself was a small, clay vessel although leather, fabric or animal horn may have also been used. The concept of the trailer was simple. A small tube, reed or quill was inserted into the trailer, which would be filled through a top hole. The potter could regulate the flow of the slip by covering the top hole that also served as a vent. In order to flow freely, the viscosity of the slip had to be maintained through frequently shaking, and adding water or a thicker slip mixture throughout the process.

In most instances, slip is poured or dropped onto another surface. Rarely is it brushed on; the clay surface is usually damp, which causes the slip to be streaky or uneven. Although brushing can produce very accurate lines, it also necessitates building up several layers to achieve a smooth surface. Pouring slip, however, instantly creates an even, opaque covering, making the best use of the materials and the potter's time.

The clays used for making the slips must have similar shrinkage and drying rates. The slips then have to be prepared with similar viscosity. Poorly prepared slips can produce an unsatisfactory flow and impede the marbling process.

The Process

The making of a Staffordshire style marbled slipware dish begins with a flat clay disk or slab rolled out to a consistent thickness. The slab is supported on a board or bat to bear the wet and still plastic clay.

Pour a coating layer of slip over the slab, covering the entire exposed surface, allowing the excess slip to drain off (figure 1).

Immediately thereafter, trail a systematic series of lines in a contrasting slip across the entire surface (figure 2). Hold the tip of the slip tube above the surface as it should not touch the wet base slip. The distance between the tip of the slip tube and the surface of the ground slip dictates the width of the lines; the further from the surface, the wider the line.

Evidence from original examples like the *Staffordshire or Midlands Dish* suggest that the lines were laid down in very specific, proscribed patterns which runs contrary to the suspicion that the marbling process used a more random application of slips. The edge of the original example is the key to determining the original configuration of the

white slip lines. There is more white at the edges and patterns loop back from this point all around the piece, which indicates the series of lines was trailed on, one at a time, in a continuum within the confines of the slab disc, doubling back for each consecutive line (figure 3). This observation was critical to deciphering the trailing process employed by the 18th century Staffordshire potters to achieve this specific marbling technique.

After the slip lines are *systematically* applied, the clay slab, still supported by the bat, is then tipped and rotated using gravity to coax the slips to flow (figure 4). This process will create a pattern of swirls (figure 5). If the slip is too watery, the lines will run and blur. If the slip dries too quickly, the slips will not flow properly. Two conscious aesthetic and practical decisions have to be made: (1) how much time can be expended before the wet slips stop flowing; (2) how to judge when to stop before the lines of color lose their separation and become muddy. Because both slips tend to firm up quickly, the elapsed time for joggling is usually thirty to forty-five seconds.

The now marbled slab is set aside to allow the slips to dry further (figure 6). Before the vessel is formed, the slips must be allowed to set up to prevent marring of the marbled surface yet the slab and the newly slipped surface must remain pliable. If the slab becomes too dry, it will crack. If the slips are still too wet, the slab will stick to the surface of the mold. After the slips are no longer tacky or wet to the touch, the entire slab, which is still plastic, is removed from the bat and placed over a "hump" mold surface down and pressed into shape (figure 7). These molds were typically made of fired clay although a plaster one is being shown here. Allow the dish to dry further to a leather hard stage. The irregular edge is trimmed with a knife to form a completely circular form and the rim is then crimped or pressed with a coggle wheel to create a pattern. The molding process helps flatten the slips and after glazing, the surface is smooth (figure 8).

Further Exploration

In the case of most English flatware, the marbled or combed decoration is created before the form. Marbleizing on hollow forms takes place, however, after the vessel has been created, usually by throwing. The ground slip is either poured over the vessel or it is dipped into a container of slip. Contrasting colored slip is then trailed on, again in a systematic fashion. The vessel is then tilted and rotated to control the gravitational flow of the slip creating a variegation of the wet slips.

In addition to marbled patterns, the same technique, without the joggling, can be used to create distinct images

Creating a marbled slip dish



Place a rolled-out slab of even thickness on a circular wooden bat. Flatten out and trim any overhanging clay. Holding the board, pour a black ground slip over the slab.



Immediately afterwards, trail parallel lines of white slip onto the wet ground. The consistency and moisture content of the slips must allow both to flow easily without running.



The marbled slab in the process of juggling. Supporting the bat while rotating it to move the slip. The slips will firm up quickly.



The marbleizing process complete. The decoration is still on a flat slab. Before forming the vessel, the slips must be allowed to set up to prevent marring of the marbled surface.



The prepared slab immediately before joggling. Note how the white slip lines doubled back at the edge of the slab. This is key to achieving a pattern similar to the original dish.



The beginning of the marbleizing process. The slab, resting on the bat, has been rotated or "joggled" to start the flow of the slips.



After sufficient drying (when the surface is no longer tacky to the touch) the slab is draped over a hump mold and pressed into place to form the dish.



Finished and glazed marbled slipware dish by Michelle Erickson, 13 $\frac{3}{4}$ inches in diameter, 2001 (from the collection of Judge Henry D. and Mrs. Kashouty).



Top: Michelle Erickson, *London Slipware Charger #1*, 15 ½ inches in diameter. Above: *London Slipware Charger #2*, 15 ½ inches in diameter.

using contrasting slip. Slip is poured onto the surface then a design, image or pattern is trailed onto the wet surface. The slipware chargers above are examples of this technique. ■

Michelle Erickson has over 20 years experience in working with 17th- and 18th-century reproduction pottery in addition to her considerable contemporary work. She produces reproductions for organizations such as Colonial Williamsburg, the National Park Service, Parks Canada, the Museum of Early Southern Decorative Arts, the Philadelphia Museum of Art and Historic Deerfield museum. She is a partner in the business, PERIOD DESIGNS in Yorktown, Virginia, an innovative firm specializing in the reproduction of 17th- and 18th-century decorative art.

Robert Hunter is a professional archaeologist and editor of the annual journal, Ceramics in America, published by the Chipstone Foundation of Milwaukee, Wisconsin. He is a partner in the business PERIOD DESIGNS. Mr. Hunter lectures widely and has written for a variety of ceramic publications including Ceramic Review, Studio Potter, Ceramics: Art and Perception, Keramik Techni and ANTIQUES.

Materials

As a ceramic artist my methodology is integral to my study of early ceramic techniques and the process of experimental archeology, using objects and fragments from ceramic history to rediscover the mysteries of the processes and materials used to create these wares. Obviously in the 21st century there are numerous commercially available materials to create a spectrum of palettes and glaze surfaces. For my purposes, however, I have chosen to develop all my own slips and glazes often using indigenous clays, metallic oxides, carbonates and sulfates and basic raw ceramic materials to create all of my glaze formulas as needed.

Suggested Clay and Slip

For cone 04 red earthenware, I use Standard's 103 (grogless) and 104 (with grog) clays and Laguna white earthenware (Miller 10) for slip decorated creamware and pearlware, which I also fire to cone 04. For slipware, a starting point would be to use your clay body (no grog) for a base. This way, you will be starting with slip compatible to your clay and glaze formulas. You can often buy dry bags of the clays you use and add various commercial stains to achieve the palette you want. I use metallic oxides, which tend to be more problematic but can offer rich results. Also, if you are looking to make a dark slip, start with an iron rich clay; it will require less colorant. Just try to find one compatible with the white or light clay/slip in terms of the firing range and shrinkage.

Tip

Do not use deflocculated slip (casting slips) for slip trailing and marbling, as the viscosity is counterproductive to this process.

Suggested Glazes

The piece I illustrated is a dark brown/black slip ground with a white slip trailed on top and the gold color of the finished piece comes from the addition of iron to the low temperature clear glaze. There are many commercially available clear glazes and you can add a commercial yellow stain for the effect. I use iron oxide to give my own cone 04 formula its yellow gold hue to closely resemble the lead glazed Staffordshire slipwares. As I do not use lead on functional wares, I often use more temperamental ingredients that have small firing ranges and require a lot of experience in glazing and firing, so I am not including those formulas as they are not user friendly nor safe.

It is important to test fire new slips and glazes. I find my small test kiln invaluable and I will often take it up slowly and down fire it to more closely resemble the conditions in the large kiln. All my pieces are fired in Electric kilns but they do not self-fire and I do not use kiln sitters as my glazes are finicky and require manual manipulation of temperature.