

Colored Clay Techniques

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Externally, surface effects created with colored clays are similar to slip-decorating, since color is contained internally and has a depth and richness unlike most glazes. Slip and colored clay effects are closely related and some can be used interchangeably. Colorant recommendations for slips are appropriate to color claybodies for thrown or hand-built work. For most colored clay work, a very fine-grain grit-free claybody is preferable, since the surface must be scraped when leather hard or sanded when dry to remove smudging and expose the patterns and colors. For most colored clay effects, it is best to start with a pure white body - a whiteware for lowfire or porcelain for midrange and highfire. Porcelain bodies are notoriously non-plastic, and most oxide or stain colorant additions will make them even less so. To adapt a porcelain body for colored clay work, use only plastic secondary kaolins like EPK or Tile-6, add 2% (of dry materials weight) Macaloid or Veegum-T as an accessory plasticizer, and add 1/2 of 1% (of dry materials weight) Epsom salts to the initial mixing water as a flocculant. Some people have reported good results with accessory plasticizers like propylene glycol, but I have not attempted this.

Very simple colored clay effects can be achieved by using different clay bodies of contrasting colors. This works well in the lowfire range, but differential shrinkage can cause problems at higher temperatures. Laminate strips of two contrasting clays together and fire to maturity. Significant warpage in either direction indicates incompatibility.

Even when working with whiteware or porcelain, large additions of iron to achieve brown or black will cause increased shrinkage if fired in reduction to midrange or highfire. Just as with slips, if you experience problems with high-iron clays in reduction, experiment with a separate base clay containing less feldspar or nepheline syenite to compensate for the iron.

In approaching colored clay techniques, it is important to consider the cost of the colorants. As is the case with slips, higher temperatures mean greater color saturation. Achieving a fully saturated jet black at lowfire temperatures might require adding 25% Mason 6600 Best Black, which gets pretty expensive. If you are doing thin surface inlaying or laminating, this clay will go a very long ways, but if are handbuilding or throwing with solid colored clay, the cost would be exorbitant. In that case, oxides are a better bet. Japanese potters doing traditional *Neriage* and *Nerikomi* generally use oxides only, and their work displays the characteristic earthy oxide colors.

In many of the colored clay techniques described below, the process of building a piece will smear the colored clay patterns, and the surface will need scraping when the piece is leather hard, or in the case of fine-grain clays, scraping or sanding when bone dry. Scraping is best done with a single-edge razor blade or a sharp flexible metal rib, but many other cutting or trimming tools may be adapted for reaching in tight places as long as the cutting edge is sharp and smooth. Sanding can be done with a green Scotchbrite abrasive pad, or with fine-grit drywall-mesh sandpaper.

Basalt Bodies

A basalt body is a clay body with sufficient metallic oxides to fire to a black or chocolate brown color. Basalt bodies may be fine-grained and smooth, as in Wedgewood basalt ware or the volcanic-like bases in Adrian Saxe's work, or may be grainy and crude, as in early sculptural works by Peter Voukos and John Mason. Basalt bodies tend to work best in oxidation firing, but can be used in reduction if the feldspar content of the claybody is decreased to compensate for the fluxing power of the added iron. Basalt bodies for lowfire are usually terracotta with added iron and cobalt oxides. For highfire, use a stoneware or porcelain body and experiment with up to 8% iron oxide and up to 5% chrome, cobalt, and/or manganese oxides. Thoroughly test different combinations before attempting significant work.

Clay Marquetry

Similar to marquetry in wood, patterned and/or solid-colored clay loaves are sliced into thin veneers using an improvised slicer with shims controlling the height of the wire as seen in figure ##. Small pieces of damp colored clays are cut from those veneer slices and assembled on a clay slab, vessel, or sculpture to create pattern or imagery. For elaborate pictorial designs, the original pattern or image is executed on poster-board and cut into template pieces used to cut out the colored clay laminations. NOTE: this technique is sometimes mistakenly referred to as "clay murrini" or "clay millefiore," but both are incorrect. Clay murrini and clay millefiore components are often used in clay marquetry, but the process of using templates to cut clay shapes and assemble an image is unique to clay marquetry.

There is no need to score and slurry when laminating colored clays on a backup slab. A light spray with water containing a little vinegar before lamination helps, and once the slab is completely laminated, smooth a sheet of canvas over the surface and roll carefully but forcefully with a rolling pin to affix the laminations in place. When laminating colored clays onto an already-constructed vessel or sculpture, score the surface lightly, spray with vinegar water, place the lamination, cover with a small piece of canvas, and roll lightly with a wallpaper seam-roll or a small printmaking brayer.

Clay Murrini

This technique is adapted from Venetian murrini glass techniques. By a variety of methods, colored clays are built up to form a loaf with pattern or image running continuously through the loaf, as seen in the checkerboard loaf in figure ##. Pattern possibilities are endless, and may include checkerboard, herringbone, basket weave, polka-dot, brick-wall, fish-scale, etc. Thin layers sliced from these loaves can be used either as components to construct forms as in Japanese Neriage, or as surface decoration laminated onto soft clay or applied to a soft-leather-hard form as described above.

In most cases, clay murrini loaves are constructed to the exact size desired, since the clay patterns will invariably distort if the loaf is pulled or rolled. With some patterns this may not be a problem, however, interesting complex patterned loaves may be constructed by combining small murrini loaves which have been rolled or stretched.

Image murrini refers to murrini that feature a recognizable image or object, as in the remarkable work of Jane Peiser. In this case the loaf is built up of cut shapes to give the desired foreground and background colors continuing through the depth of the loaf. Simple images work best. *NOTE:* this technique is sometimes mistakenly referred to as *clay millefiore*. Millefiore, which means *thousand flowers* is just one of the traditional Venetian glass murrini effects, while the term murrini refers to any image or pattern loaf created by this technique.

Lamination of Colored Clays

Rather than small pieces forming an image, an entire piece can be laminated with colored clay veneer cut with a slicer as seen in figure ##. Perhaps the best approach is to laminate an entire slab with laminations and then build something from the slab, such as the box seen in figure ##.

Marbleized and Grained Colored Clays

Colored clays can be combined and partially cut/wedged together, twisted, and stretched to create marble (or other rock) or wood-grain effects. Variations in grain patterns can be achieved by twisting and stretching the clay in different directions. Also, the grain pattern will be more finely dispersed if the various colored clays are cut and combined repeatedly before wedging, twisting or stretching. Slices of marbleized clay can be used in press-molds, slab construction, or clay marquetry. Solid lumps of marbleized clays can be used in pinch-forming and thrown forms.

Neriage

This is a Japanese technique where slices of a clay murrini loaf are pressed edge to edge into a mold, usually with a coat of slip between pressed pieces, creating wares with the same pattern showing inside and out.

Nerikomi

Also a Japanese technique, colored clays are marbleized and used in handbuilt or more often in thrown forms. Sometimes a solid lump of marbleized clay is thrown, creating a swirl pattern on the surface, while in other cases a form is thrown with normal clay and marbleized clays are pressed into the surface. In some cases, throwing is resumed after lamination. *NOTE:* even in Japanese pottery literature there is much confusion over correct use of the terms *Nerikomi* and *Neriage*. Some contemporary non-traditional colored clay work is referred to as *new Neriage*.

Slip Effects with Colored Clays

The most important use of slips or slurries in colored clay work is as the standard joining material, as is the case in all ceramic work. In this case, however, the slips or slurries may be colored and used as a decorative medium as well. For example, when joining pieces or slabs of colored clays, you have the choice of using a colored slip which matches the adjoining clays, or a contrasting slip that will create a very fine line of contrasting color. This may be used to great advantage whenever a very thin line of color is desired. White or colored slip may also be used as the ground upon which to apply colored clay sprigging or appliqué.

Sprigged Colored Clay

In a variation on the sprigging technique described earlier in this chapter, small coils, balls, wads, or press-molded pieces of colored clay are applied to a contrasting claybody or slip ground. Sprigs can be hand-formed, or can be created with a small extruder as used with polymer clays.

Swirlware

Although a bit of a cliché in historic and contemporary ceramics, there's still room for innovation with colored clays on the wheel. Look at the work of Niloak Pottery from the Arts and Crafts movement of the late 19th and early 20th centuries. Swirlware refers to the standard spiral pattern formed when a lump containing two or more colored clays is thrown on the wheel. In one approach, start with a lump of marbled clay and center and throw conventional fashion. This works best with a fairly coarsely marbled loaf featuring highly contrasting colors. In another variation, a lump of contrasting colored clays is especially constructed for throwing, alternating pie-slices of contrasting colors. For a third approach giving a more subtle effect, cut a cylindrical lump of clay vertically into pie slices, insert a thin slice of contrasting colored clay between each slice, and throw in a conventional fashion. A fourth and particularly effective techniques involves partially throwing a form, pressing solid or marbled contrasting colors into the surface, and then throwing to resolve the shape. This method offers the greatest possibility, since you have complete control over where you press in the contrasting clay and how much you throw the form after adding the colored clays.

Not everyone has a reversible wheel and can throw in both directions, but if you are serious about creating interesting swirlware effects, you might try it. Needless to say, the most common and uninteresting swirlware displays a constant spiral that is widely spaced near the bottom of the vessel and more tightly spaced near the top. You can envision the kinds of variation you get by reversing the wheel and throwing in the opposite direction.