

Workshop from Home with Liz Pechacek Resources from February 16, 2021

- Liz use a cone six porcelain and black stoneware from Standard Ceramics, a groggy red stoneware from Amaco called Terra Cotta 77, and four different casting slips of her own recipe (2 porcelains, a black porcelain and a brown stoneware).
- Liz bisque fires to cone 06.
- She glaze fires in an electric kiln to cone 6 in oxidation.
- Liz has a studio assistant, Darah Lundberg, who does all of Liz's casting and mold cleanup, as well as some other studio tasks. Darah's working about 8 hours a week in her own studio and they're transporting slip and greenware during Covid.

Links from Liz Pechacek:

<https://instagram.com/lizpechacek>
<https://www.facebook.com/elizabeth.pechacek>
<https://www.facebook.com/lizpechacek>
<https://www.lizpechacek.com/>

Liz's Material & Tool List

1. Some kind of water-based wax (thoughts on wax below)
 - a. I particularly like the Amaco wax resist that they sell at Dick Blick. It is tinted with a greenish blue color that burns away and makes it a little easier to see. I used to use a thick, cream-colored wax that is no longer available in my area—that one is my second choice if it's available. I am not sure what the chemical makeup of any of these waxes are (and there are many different ones) but I like to use ones that are thick and creamy.
 - b. I mostly use a very diluted wax solution for the greenware and masking processes. I use undiluted wax when I trail it from a bottle.
 - c. The wax that I like to use cannot be frozen. As I live in a cold climate, I sort of need to stock up in the fall before winter descends and it can no longer be shipped.

- d. There are other water-based waxes that will work for these processes. You will have to experiment with what you have. Some of the waxes will get “chippy” when you’re scratching through them, and some are more brittle than others. Sometimes it’s better to carve into the waxed area when it’s still a little damp, sometimes it’s better to let it dry a bit first.
 - e. Hopefully, whatever you have access to will work for you. Since I discovered the green Amaco wax, I haven’t explored much with others!
 2. Some kind of colored slip, engobe or underglaze (Thoughts below)
 - a. Use whatever you have that fires to your preferred firing temperature.
 - b. I like to water down the slip to about the consistency of skim milk. You should be able to see the bristles of the brush when you stir it up and pull the brush out.
 - c. It takes a fair amount of water, so it’s best to use some type of lidded Tupperware that’s separate from the original underglaze jar.
 - d. I personally use one cone 6 engobe recipe (see below for the recipe) for all my colors. I add Mason stains for color and a little prepared Amaco gum solution to make it lay down smoothly.
 3. Fan brush (I like the faux squirrel brand) and cheapish calligraphy-style round brush.
 4. Needle tool and diamond pad for sharpening.
 5. X-Acto knife.
 6. Shred tool (I use the Sherrill Mud Shredder).
 7. Strips of plastic cut from vegetable produce plastic bags (about 2” wide and as long as you can stand to cut them.) It’s nice to have a variety of lengths.
 8. Banding wheel.
 9. Some type of bat for moving the piece on and off the banding wheel. I like plaster or bisque the best, but anything is fine.
 10. Clay—any kind will do. Grog makes scratching the lines a little more difficult but it’s still doable.
 11. Glaze.
 12. Soft, kidney-shaped throwing-type sponge. I like both the blue and orange-colored Sherrill Mudtools. There’s a round thinnish style that works too but I don’t know who sells it. The fat, yellow type is not well-suited to this technique.
 13. Bucket of water.
 14. Hair dryer.
 15. 18-gauge squeeze bottle with metal tip and wire in the lid that keeps it from clogging (fineliner is good).
 16. Amaco gum solution.
 17. Mason Stains.
 18. Mechanical Pencil.
 19. Sharpie Marker.
 20. Dust Mask.

21. 3M green scrubbie-type scouring pad.

Liz's Building Techniques

Coil/Pinch Method

1. Start with a hamburger patty of clay.
2. Thin the middle while leaving a thick ring around the outside edge.
3. Lay the piece on your bat and pinch up the thick sides.
4. Work the thicker area in the middle toward the edges in a radial fashion.
5. Smooth and pinch the sides up again.
6. Even everything out, clean up, and compress the floor with a sponge.
7. Pinch the wall upward using both hands and slightly squeezing the clay together as you pinch.
 - a. At this point, if you want the sides to bow out like a bowl, don't squeeze together, but instead pull apart slightly.
8. Once properly refined, wrap rim in a strip of plastic.
9. After the piece has firmed up, trim up the bottom edge with the mud shredder, metal rib, rubber rib, and sponge.
10. Pinch plastic covered rim to a point.
11. Roll coil, uncover rim, and position coil right on the tip of the pinched point.
 - a. Add a brush of water if the piece seems a little dry to the touch.
12. Connect the ends of the coil together smoothly.
13. Push clay down the wall on the inside using your thumbs to create a scallop pattern and supporting the outside wall with the other four fingers of your hand.
14. Smooth the scallop pattern fully into the wall with a sweeping motion. Clean up with sponge if needed.
15. Adjust the wall by pinching inward if it's bowed out a lot from the inner adjustment.
16. Push the clay downward on the outside of the wall with your finger or thumb while supporting on the inside with the other hand. Swipe the clay in both directions, then smooth with the rib and sponge.
17. Pinch upward and cover the rim again if you want to make the vessel higher by adding more coils.
18. Roll and flatten a coil for the handle.
19. Cut it to approximately handle length and plant the ends on your work bench.
20. Pinch, model, cut, and smooth until it looks pretty good.
21. Slip, score, and attach the handle to the mug when the rim is firm enough to not distort.
22. Cover with plastic overnight and slowly dry if using porcelain.

Liz's Wax Surface Techniques for Bone-Dry and Bisque

Greenware Layered Technique

1. Map out shapes with graphite pencil.
2. Wax around the outside of the shape using diluted wax and a round calligraphy brush. If you make a mistake, clean it up with the X-Acto knife.
3. Rinse the brush periodically in water to keep it from getting too gummy—if it becomes gummy and gross, clean the bristles with warm water and dawn dish soap.
4. Using the fan brush, stir up your diluted slip, engobe, or underglaze (skim milk consistency).
5. Lay the engobe onto the unwaxed portion of the shape you just waxed around. Work quickly and go in several different directions with several coats.
6. Clean up the edges a bit with the edge of your kidney sponge.
7. Let the engobe dry and cover again with diluted wax.
8. Once the wax is dry, use the sharpie to sketch out your next round of shapes.
9. Use your sharp needle tool to scratch lines and patterns through the waxed slip, creating an unwaxed groove. Brush the dust out from the scratched lines.
 - a. Wear a mask for this! It's very dusty and some of the Mason stains contain heavy metals. Beyond that, dust is a hazard to your lungs.
 - b. Be careful not to grip the waxed areas too firmly, as you can lift up both wax and engobe if it sticks to your hand, leaving an unintentional mark.
 - c. Be careful when scratching designs close to one another as the waxed slip in between can chip and break away, marring your motif.
10. Paint the diluted engobe into scratched lines. You can be a bit sloppy, just make sure it's really filling all the lines. If it's not going in, you may need to dilute the engobe more.
11. Once it's dried a bit, lightly wipe away any surface residue with your kidney sponge.

Bisqueware Layered Technique

1. Lightly sand the outside of the piece to remove any wax residue after the bisque and wipe down with a cloth. (Wear a mask for this!)
2. Glaze the interior and allow it to dry fully before waxing! I sometimes use the oven set to 180°F to do this quickly if I need to work on the piece the same day.
3. Sketch out shapes with graphite.
4. Wax around the perimeter. If you make a mistake, clean it up with the X-Acto knife. (It will be a bit hard, but is doable).
5. Trail the undiluted wax from your squeeze bottle in a pattern within the unwaxed part of the shape. Watch out for drips!
6. Clean up the perimeter of the shape of excess wax globules as you work with your kidney sponge.

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7. Let it dry fully, then heat the waxed area up with the hair dryer.
8. Paint on glaze with fan brush using a light hand.
 - a. Glaze should be about whole milk consistency—if it flows together over the wax, you might need to thin it.
 - b. Clean up any lines that flow together with the needle tool.
 - c. If you inadvertently remove too much glaze, you can dab it back in on that spot with the brush.
9. Clean up around perimeter of shape with kidney sponge.
 - a. I encourage you to experiment with dipping in glaze or using alternate methods to make it fun! I have a very rigid technique that I've developed over years and that might not work for you. This method of layering with wax and then burning the wax away can be used in a variety of fun ways I haven't even thought of. The sky is the limit!

Liz Pechacek's Recipes

Translucent Porcelain Engobe (From Val Cushing): Cone 6

Ferro Frit 3134	12%
Minspar 200	28
Grolleg Kaolin	25
6 Tile Kaolin	25
<u>Silica</u>	<u>10</u>
	100%

Add:

Enough water to make it like pudding

Amaco Gum Solution (a splash)

Note: It can be dehydrated and molded as a clay as well. I mix up a 10,000 gram batch and scoop it out and color it as I need it—this way I can also color it and spread it on plaster if I want a bit of colored porcelain to play with.

Linen White Glaze: Cone 6

Wollastonite	20%
Ferro Frit 3134	20
Custer Feldspar	20
EPK Kaolin	20
<u>Silica</u>	<u>20</u>
	100%

Add:

Zircopax 10%

Amaco Gum Solution (a splash)

Note: A good, solid white glaze. It's milky-clear without the zircopax. I mix up 10,000 grams and dole some out into little tupperwares, then add colorant as needed.

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Translucent Porcelain Casting Slip (10,000 grams—good for a 5-gallon bucket): Cone 6

Nepheline Syenite	3,500 grams
Grolleg Kaolin	3,500
EPK Kaolin	1,000
Silica	<u>2,000</u>
	10,000 grams

Add:

Water	3,600 grams
Darvan 811	36

Note: This clay is extremely non-plastic, is not appropriate for adding handles, and will settle a bit so you have to frequently mix while you're using it, but it's nice, white, and fairly translucent at cone 6. You can also use Darvan 7 instead of Darvan 811.

Stoneware Casting Body: Cone 6

Minspar 200	2,500 grams
Cedar Heights Redart	3,500
EPK Kaolin	1,200
Laguna Blackbird Substitute	500
OM4 Ball Clay	500
Velvacast	1,300
Silica	<u>500</u>
	10,000 grams

Water	4,200
Darvan 811	47

Note: This clay is modeled after a Yixing-type clay. I have to admit that this clay likes to gel and is strangely frothy when freshly mixed. I typically sieve it twice to deal with the bubbles and usually have to add some more water and Darvan to get it to flow. It also shrinks a lot- even more than the porcelain. For all its diva ways, I still love the rich surface and it is plastic enough to add a coil of different clay after casting.

(Liz Modified) Andrew Martin's Slip Casting Porcelain: Cone 6

Custer Feldspar	1,650 grams
Nepheline Syenite	1,650
Ferro Frit 3134	295
6 Tile Kaolin	1,941
Grolleg Kaolin	1,941
OM4 Ball Clay	873
Silica	<u>1,650</u>
	10,000 grams

Note: Liz added the Ferro Frit 3134 to make the clay lighter. You can skip the Ferro Frit 3134 and add 800 grams of Mason Stain 6600 for black slip. This clay is appropriate for adding handles and even a coil of clay if you're super-duper gentle.

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