

The goal of this book is to document my exploring $\Delta 6$ oxidation glazes. My personal goal is to make robust, food safe, beautiful glazes that play nicely with other glazes.

When making glazes recipes it is possible to complete the pallet with only a few base recipes and different colorants or by using different base recipes. I generally prefer to have as many unique base recipes because doing so increases the interaction between layers of glaze.

I use GlazeMaster to help formulate recipes.

My studio uses dipping and pouring as the main ways of applying glazes. I do not have a spray booth setup yet.

Every potter has their opinion about how safe some of the materials we use truly are. All of them are a respiratory hazard. Work in a well ventilated area and wear the recommended personal protective equipment. I feel I follow a health conscious route summarized in this table:

Chemical	Max usage	Reasons:
Barium carbonate		I have chosen to not use barium.
Cobalt oxide or carbonate	<2%	Cost and potential toxicity
Copper oxide or carbonate	<4%	Potential to oversaturate the glaze
Chrome oxide	<1%	Concerns about toxicity. I only use chrome for pink glazes
Manganese dioxide		I have chosen to not use manganese at all.
Nickel oxide	Unknown	
Vanadium compounds	<5%	It is actually not a very toxic material
Zinc oxide		Unsure, Zinc is common but also very reactive

Material purchase list. Before weighing out the materials, check you have enough of each material. The "starting amount" should cover making tests and a few 3000 gram batches.

Ingredient	Starting Amount	How much I purchase at a time
Silica (300+ mesh)	10 lbs	Bag
China clay (EPK or grolleg)	10 lbs	Bag.
Ball clay (OM4)	1 lbs	10 lbs
Potash Feldspar (Pacer)	10 lbs	Bag
Nepheline Syenite	5 lbs	Bag
Talc	1 lbs	Bag
Dolomite	1 lbs	10 lbs
Whiting	5 lbs	Bag
Wollastonite	1 lbs	Bag
G. Borate (Laguna)	5 lbs	Bag
Frit 3134	5 lbs	Bag
Frit 3124, Frit 3195, Frit 4110	Optional	10 lbs, or as needed

Tin oxide	1/2 lbs	10 lbs, expensive ingredient
Cobalt carbonate	1/2 lbs	5 lbs, expensive ingredient
Titanium Dioxide	1/4 lbs	5 lbs
Copper carbonate	1/2 lbs	5 lbs
Chrome oxide	1/8 lbs	1/4 lbs, a full batch of Purple uses just 12 grams
Red iron oxide	5 lbs	Bag
Rutile (milled or ceramic)	1 lbs	10 lbs, I prefer the coarser milled rutile but many glaze mixers will choose the ceramic variety
Zinc Oxide	1 lbs	10 lbs
Zircopax	1/2 lbs	10 lbs
Bentonite	1/2 lbs	1 lbs
Nickel Oxide	Optional	1/4 lbs, as needed
Vanadium	Optional	1/4 lbs, as needed

Silica comes in several mesh sizes. I started with 200 mesh (it is cheaper) and didn't really notice a difference after moving to 400 mesh. Most potters seem to recommend 300+ mesh silica.

China clay or kaolin clay is type of clay. Specific mines will have slightly different properties. All of my original testing was done with EPK because it costs less than groleg kaolin. I am still waiting on my last bag of EPK to run out before I switch over.

Ball clay is a plastic clay that isn't used too frequently in glazes.

There are many different **potash feldspars**. The chemical consistency will change with time. I have decided to use the widely available potash feldspar from Pacer.

Nepheline Syenite is a reliable sodium flux.

Talc and **dolomite** are excellent sources of magnesium.

Whiting is a naturally nearly pure calcium carbonate.

Wollastonite is calcium silicate.

Gerstley borate has changed several times. I usually put it down as G. Borate to encompass the synthetic gillespie borate as well.

Frit 3134 is my favorite boron frit. Other numbers are used by many glaze makers.

Red iron oxide comes in several varieties. I purchased the least expensive Spanish Red and continue to use it when the quality of iron is not important. The higher purity synthetic varieties may have significance in some glazes.

Zinc oxide has different purities which are important to crystalline glazes

I have not worked much with **nickel** or **vanadium** at this time.

All of my time and materials for glaze testing is paid from my own pocket. If you wish to support this project financially, please mail a check to

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