

## Curaumilla Glaze List – for dry glaze once-fire wood and soda

At Curaumilla Arts Center in Chile, we used a groggy stoneware body w/iron and tested a Spanish white body. Works were dry-glazed and once-fired in wood and soda. Glazes below were at times adjusted from their cone 10 bisque-ware glazing format to change the amount of clay in the raw glaze. If you want to read about once-fire, see Frank Hamer's *A Potter's Dictionary of Materials and Techniques* and Robert Fournier's *Illustrated Dictionary of Practical Pottery*.

| <b>Charcoal Black</b> cone 9-11<br>Works for dry glazing, once-fire |              |
|---|--------------|
| Kentucky OM #4  | 12.4         |
| Custer feldspar   | 65.2         |
| Dolomite  | 9            |
| Silica  | 9            |
| Whiting   | 4.5          |
| <b>total</b>  | <b>100.1</b> |
| +bentonite  | 3.6          |
| + RIO   | 4.4          |
| + 6600 Mason black  | 4.4          |

| <b>Dougs Shino Glaze</b> cone 7-11<br>Reduction, wood, soda. Used at Curaumilla for dry-glaze once-fire |             |
|---|-------------|
| Kona F-4 feldspar   | 14.6        |
| Spodumene   | 12.5        |
| Kentucky OM #4  | 16.6        |
| Nepheline syenite   | 50          |
| Soda ash  | 3.3         |
| EPK   | 2.9         |
| <b>Total</b>  | <b>99.9</b> |

| <b>Arrayan</b> –used as milky white w/zircopax or as clear w/o zircopax 9-11.Used for dry-glaze once-fire wood and soda |            |
|---|------------|
| Feldspar  | 40         |
| Silica  | 30         |
| Whiting   | 20         |
| Kaolin  | 10         |
| <b>total</b>  | <b>100</b> |
| Zircopax  | 10         |
| Bentonite   | 2          |

| <b>Rob's Green</b> c 9-10. Transparent green in oxidation, red to black in reduction. |            |
|---|------------|
| Cornwall Stone  | 71.43      |
| Whiting   | 17.14      |
| Gerstley borate   | 4.76       |
| Strontium carbonate   | 6.67       |
| <b>Total</b>  | <b>100</b> |
| +Copper carbonate   | 9.52       |
| +Bentonite  | 2          |

| <b>Randy' s Yellow Glaze</b> c9-11 Satin matte breaking to brown thin |            |
|---|------------|
| Dolomite  | 11.6       |
| Strontium carbonate   | 20.7       |
| Nepheline syenite   | 58         |
| Kaolin  | 9.7        |
| <b>Total</b>  | <b>100</b> |
| Zircopax Plus   | 8.9        |
| Red iron oxide  | 2.7        |
| Bentonite   | 4.3        |

| <b>Shino White-Grey cone 9-11</b><br>Used at Curaumilla for dry-glaze once-fire. Will carbon-trap in early reduction. |             |
|---|-------------|
| Nepheline syenite   | 44          |
| Spodumene – theoretical   | 28          |
| Kentucky OM #4  | 10.6        |
| Ash wood  | 14          |
| Silica  | 2.8         |
| <b>Total</b>  | <b>99.4</b> |

| <b>OHATA</b> cone 9-11 recalculated for dry-glaze<br>Saturated iron tomato red in reduction w slow cooling. Brown to amber w some iron crystals in wood and soda. Reformulated for dry-glaze once-fire at Curaumilla |            |
|--|------------|
| Potash feldspar  | 39.4       |
| Silica   | 27.9       |
| Ball clay  | 10.6       |
| Dolomite   | 9.3        |
| Whiting  | 2.7        |
| Bone ash   | 9.7        |
| Alumina hydrate  | 0.4        |
| <b>Total</b>   | <b>100</b> |
| + RIO (red iron ox.  | 12         |
| + bentonite  | 2          |

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--- too intense to cover whole pot.

|  |             |
|--|-------------|
| <b>Reeves Green</b> -- for accents--dot and slip trailing. Softer and mintier in wood and soda than reduction. |             |
| Potash feldspar  | 63.1        |
| Whiting  | 15          |
| Silica   | 11.6        |
| Ball clay  | 10          |
| <b>Total</b>   | <b>99.7</b> |
| +Chrome oxide  | 3.0         |
| +Bentonite   | 2.00        |

|   |             |
|---|-------------|
| <b>Emily Purple w Wood Ash</b> for dry glaze once-fire C9-11. This went blue where it got much atmosphere. See below. |             |
| Gerstley borate   | 11.3        |
| Talc theoretical  | 15          |
| Ball clay   | 9.4         |
| Silica  | 39          |
| Ash wood  | 17.3        |
| Alumina hydrate   | 7.9         |
| <b>Total</b>  | <b>99.9</b> |
| +Cobalt oxide   | 2           |
| +Bentonite  | 2           |
| +Tin oxide  | 2           |

The purple is a magnesium-cobalt color interaction. In the wood and soda, the vapors in the kiln overwhelmed that flux-colorant interaction and tended to turn it all a harsh, alkaline blue. I recommend reduction firing to see the purple color. Recipe below

|   |            |
|---|------------|
| <b>Emily Purple c9-10 reduction.</b> Buttery purple in reduction. Where it's next to a glaze that dilutes it, e.g. clear or celadon, it will give blue borders. |            |
| Potash feldspar   | 41         |
| Colemanite  | 12         |
| Dolomite  | 7          |
| Talc theoretical  | 15         |
| Kentucky OM #4  | 5          |
| Silica  | 20         |
| <b>Total</b>  | <b>100</b> |
| Cobalt oxide  | 2          |
| Bentonite   | 2          |
| Tin oxide   | 2          |

|  |             |
|--|-------------|
| <b>Tostado c9-11</b> Good in wood-fire. Used for dry-glaze once-fire |             |
| Feldspar   | 67.2        |
| Dolomite   | 10.9        |
| Whiting  | 9.8         |
| Kaolin   | 6.1         |
| Gerstley borate  | 5.9         |
| <b>Total</b>   | <b>99.9</b> |
| Zircopax   | 10          |
| Bentonite  | 1           |
| Rutile   | 2.2         |

### Inclusion stains

We used inclusion (encapsulated) stains to make the colors for decorating on top of glaze. These also worked under some glazes.

Bordeaux red, Brilliant Yellow, Orange: mixed by volume 1 Gerstley Borate to 1 stain.

### Other decorating colors used:

Mixed 1 colorant to 2 Gerstley borate: chrome (green), rutile (golden). The chrome turned black-brown in wood and soda. Not as green as in reduction.

|  |            |
|--|------------|
| <b>UF SLIP BASE c 8-11</b>   |            |
| EPK  | 36         |
| Kentucky OM #4   | 27         |
| Custer feldspar  | 15         |
| Whiting  | 7          |
| Flint  | 15         |
| <b>Total</b>   | <b>100</b> |
| for white +7% opax<br>for blue: + 3% cobalt carb<br>for green: +4% chrome<br>for blue/green: 3% cobalt carb + 0.5 chrome oxide |            |

|  |            |
|--|------------|
| <b>UF SHOP BLACK</b> – this slip turned blue under glaze and in soda. Recommend using cobalt-free black stain or oxide mix to keep it black rather than blue |            |
| Alberta slip   | 94.7       |
| Nepheline syenite  | 5.3        |
| <b>Total</b>   | <b>100</b> |
| Cobalt oxide   | 5.00       |

## Curaumilla Glaze List – for dry glaze once-fire wood and soda

| <b>Amarillo (yellow) slip for wood and soda. C 9-11</b> |               |
|---|---------------|
| Ochre yellow with waxy surface in wood and soda         |               |
| Nepheline syenite                                       | 31.58         |
| Ball clay   | 63.16         |
| Silica  | 5.6           |
| <b>Total</b>  | <b>100.34</b> |
| Tin oxide   | 5.26          |
| Titanium dioxide  | 10.53         |

| <b>Randy's Yellow slip for wood and soda. C 9-11</b> |            |
|--|------------|
| Nepheline syenite                                    | 60.95      |
| EPK  | 39.05      |
| <b>Total</b>   | <b>100</b> |
| Zircopax   | 5          |
| Titanium dioxide                                     | 5          |

| <b>Shino Slip C9-11</b>                                 |      |
|---|------|
| Like Shino glaze, but allows combing because it's thick |      |
| Kona F-4  | 8.6  |
| Spodumene   | 12.2 |
| Soda ash  | 3.2  |
| Neph sy   | 36   |
| Ball clay   | 12   |
| EPK   | 28   |
| +Bentonite  | 2    |

| <b>Bauer Flashing Slip c 9-11 wood or soda.</b> |             |
|---|-------------|
| Flashes orange. Usually applies thinly.         |             |
| EPK   | 46.9        |
| Kentucky OM #4                                  | 46.9        |
| Borax   | 6.1         |
| <b>Total</b>                                    | <b>99.9</b> |
| Zircopax  | 10          |