

## Glaze Test Briefing Document

### Shino Glaze

I think the problem we have is that the kiln did not get anywhere near 1300, and in some areas, I suspect it only got the 1280 cone to sag a bit. I think the Sven Bayer recipe is OK for the Shino, as it should work OK when we get the kiln to 1300. Checking it using the Unity Formulae against the other Shino recipes on the DCPG sheet – see calculations 1 to 3. It is close to the Ruthane Tuball recipe. However, the DCPG is off to the side, not that it means it won't work if this is a genuine recipe, it may just mean that you can get a Shino glaze using a wide range of proportions.

All the recipes are using basically the same materials, with the Sven recipe having slightly higher Silica to Alumina ratio and so could be slightly glossier. It looks like the Nepheline Syenite has been used to keep the Silica to Alumina Ratio down so that a more matt, opaque glaze is produced (?). The proportions can be taken from a triaxial test chart, so I will do series of tests covering all these recipes. Also out of interest, I will cover the area where the Pot Feld is replaced with Neph Syn, see calculation number 4 - alternative DCPG recipe, and all test points between. See the second sheet in the Glaze Test Workbook.

### Celadon Glaze

The Celadon on my clay, which is Valentines Birch with iron content of 1.72%, has run down the sides and obviously will get worse at 1300, and therefore will need alteration before using at the higher temperature. Looking at the unity formulae, it does not look as if it has enough alumina or silica to make 1300 – see calculation number 5 . Anyway, I think we should be going to a simpler mix and as I am a big fan of the Leach 4/3/2/1 mix, I am thinking of trying that, but altering it for 1300 by adding 0.1 molecule of Al<sub>2</sub>O<sub>3</sub> and 1.0 molecule of SiO<sub>2</sub> in the unity formula – see calculation 7. Notwithstanding that, I like the idea of using the same recipe, but with variation in the iron content to give either Celadon or Tenmoku.

On the DCPG glaze bucket from the last firing, the material quantities listed on the side do not include Talc. Doing a unity check – calculation 6, shows that this probably does not make much difference, except MgO tends to mattness in a glaze, so it probably was left out.

The problem I have is that I do not have many glazes rated to 1300deg C to compare to what I propose to do. So I will go ahead and glaze test the Leach Glaze with both 1.5% and 10% iron oxide, reducing the Pot Feld in sequence to meet David Green Recipe which is for 1320deg C.

I have now found a 1300deg C glaze in C R 188 Glaze Supplement

### Tenmoku Glaze

I have no idea what was the recipe for the DCPG Tenmoku. Hopefully we will get a suitable result from the tests and probably we need a more matt glaze than for the Celadon.

See DCPG Glaze Test sheet for the number and proportions of proposed tests.

### Ash Glaze

Whilst breaking up the pallets for the wood store at Judi Tribe's house, she offered to collect the ash from her wood stove for use as a glaze. The wood she generally burns is Sweet Chestnut, but the batch she has given us contains Oak.

Looking through my reference books and Ceramic Review it seems that the majority of potters wash their ash before use. C R 4 has an article by Katharine Pleydell-Bouverie, the doyenne of as glazing and she has the full procedure set out in the article. She washes the ash pouring off the excess between washes until the water is clear. I am therefore washing the ash before use.

This procedure is also examined by David Green in his book A handbook of Pottery Glazes. He shows the comparison between the analysis of both washes and unwashed ashes, shows the effect of the loss of fluxes by the washing. This in fact helps us in getting a recipe that fires to 1300deg C. He shows that the potassium and sodium compounds are dissolved out more than Magnesium and Calcium compounds. This would tend to create a more yellow colour pallet.

Glaze tests have been taken from a triaxial graph based on the David Frith recipe and the Standard Glaze Recipe.