

POTTERY GLAZE TESTING: TURNING BLUE TO GREEN



Hannah Perry | David Funk | Tyler Junior College

GLAZE

Glaze is defined in *The Potter's Dictionary of Materials and Techniques 5th edition* by Frank and Janet Hamer as “a layer of glass which is fused into place on a pottery body.” The book explains that this glass is initially applied in the form of powder, which is made up of fluxes, stabilizers, and glass-forming materials. When these are fired to extreme temperatures, they melt and the materials fuse together to become glass, and fuse to the clay.

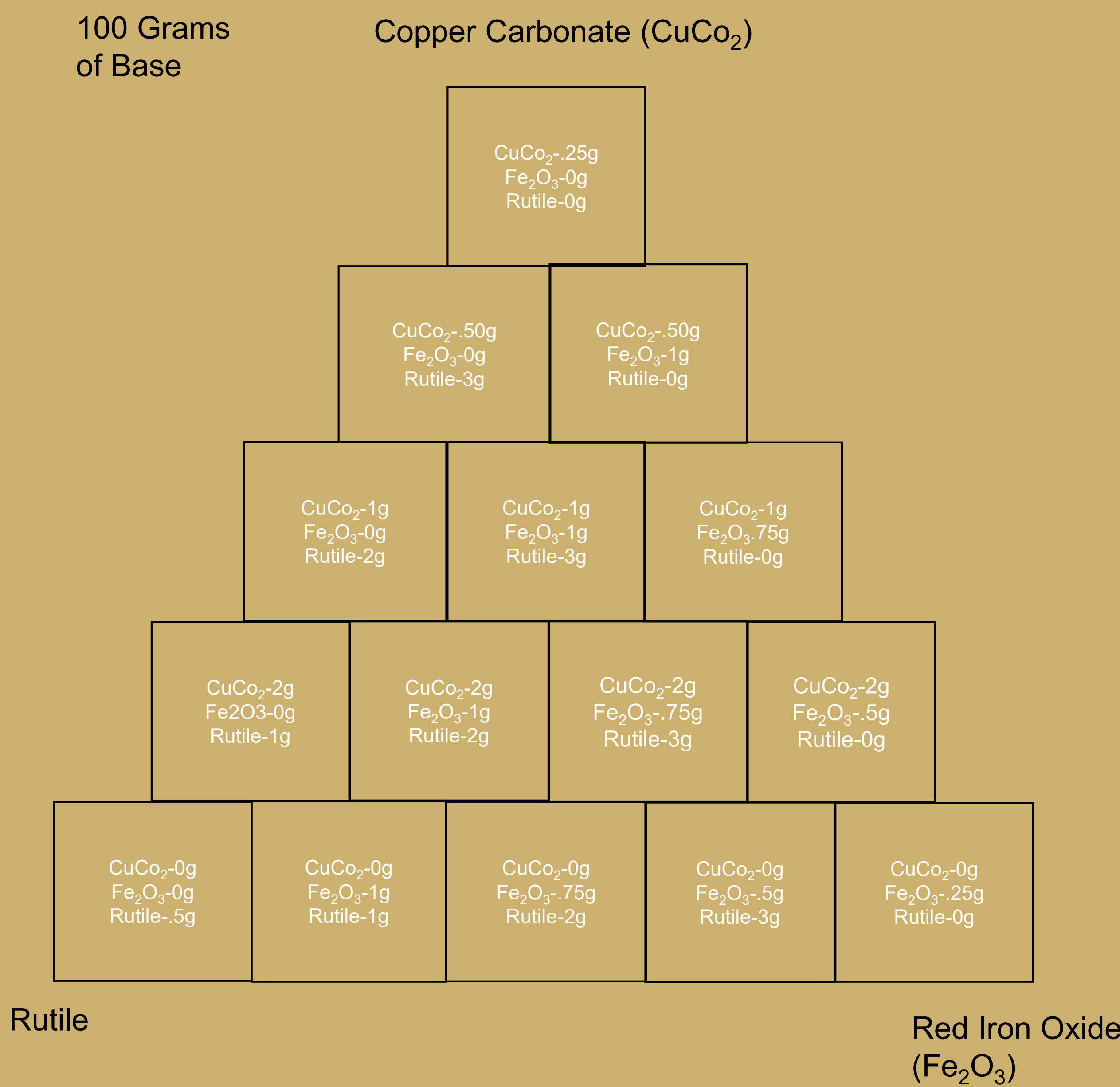
FLOATING BLUE

This is a cone six glossy glaze with depth in that there appears to be a blue cascading layer floating over a dark, earthy undertone. This is more clear when applied to a textured surface, allowing the glaze to break and reveal the undertone.

THE TRANSFORMATION

The desire is to see this beautiful glaze with all of these desirable effects with a green hue rather than blue. The desired effects are the cascading floating layer look, the earthy break over texture, and the richness of the main color. The earthy color is mainly caused by the colorant red iron oxide; the way the glaze breaks over texture to reveal said earthy color is caused by rutile. These two colorants will therefore be included in testing. The colorant to be replaced is cobalt carbonate, and its replacement is copper carbonate, a typical green colorant. The percentages to be used for the addition of these to the base will be determined by the use of the triaxial blend method.

COMBINATIONS



TIAXIAL BEND METHOD

The above diagram is an example of the triaxial blend method. *Clay: A Studio Handbook* by Vince Pitelka describes this method as follows: “Method for testing three-way combinations of glaze materials, where proportional amounts vary through a series of samples between three limits.”

THE TEST GLAZES BEFORE MIXING



FROM HERE TO THERE

After adding 75 grams of water to each cup and mixing it all, the test tiles were dipped into the glazes to be fired.

TEST TILES BEFORE FIRING

