

INSIGHT Success Examples

Cone 10R transparent base



Solved bubbling and crazing problems by calculating how to introduce wollastonite for whitening while maintaining the chemistry. This base is used for celadon, tenmoku.

Cone 10 Alberta Slip

Calculated a mix of native materials and minerals that has the same chemistry as Albany slip, then calculated how to increase thermal expansion to fix a shivering problem.



Cone 10 Ravenscrag Slip

Formulated a glaze by starting from a conservative target formula supplying the needed chemistry using a maximum of native materials conditioned with a minimum of refined minerals.



Randy's Red, Floating blue

Formulated a chemical substitute for Gerstley Borate (named Boraq) so most of the classic recipes employing it would not be lost. We released full information on this from the beginning at www.gerstleyborate.com.



Lithium brown Albany glaze

Fixed shivering and reduced potential toxicity and leaching concerns in a classic Albany glaze by substituting lithium for boron molecule-for-molecule.



Cone 6 20x5 base recipe

Evolved the chemistry of a cone 6 transparent glaze to adapt it to all sorts of uses and to solve problems (documented process on digitalfire.com since 1996).

Cone 6 Matte

Adjusted 20x5 base toward matte chemistry and then substituted an alumina bearing frit while maintaining the rest of the chemistry to cut the high clay content.



Buying INSIGHT

Available for Windows, Macintosh and Linux at <http://digitalfire.com>. Level 1 - \$59, Level 2 - \$149.

Level 2 includes our ceramic information library and Magic of Fire book (teach you to make practical use of ceramic chemistry) and preferred access to www.ceramicmaterials.info. Both levels include instruction manual.

Downloading

When you buy a key for INSIGHT you get free access to download updates for 3 years (level 1) and 4 years (level 2).

INSIGHT Features

- Used and taught in hundreds of universities
- Ideal for demonstrating concepts like unity, analysis, formula, mole%, LOI, formula-to-batch
- Identical on Windows, Mac, OSX, Linux; translatable to other languages
- Talks to ceramicmaterials.info web site
- Has report templates, XML file storage, multiple picture storage, huge ceramic technical library
- Uses industry standard SQLite database
- Uncomplicated main window, step-by-step lessons in manual, tutorial videos on web site & CD

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DIGITALFIRE INSIGHT Software

An elegant design and user interface that only our 25 year tradition could produce.

We are seasoned experts in ceramic technology, computers, programming and the internet. Ceramic software is our only business since 1980.



Without ceramic chemistry you cannot properly answer:

- Why is my glaze **leaching**? Is it likely to leach?
- Why is this glaze so **touchy** and difficult to keep consistent?
- How do I fix **crazing**, settling, **crawling**, scratching, **blistering**, pinholing and other problems?
- How can I change the firing temperature? The gloss? Mattness?
- Why doesn't this colorant work in this base glaze?
- How do I **substitute materials** that are expensive, problematic, unavailable? One frit for another?
- How can I best **utilize a raw material** that I have easy and inexpensive access to?
- Can I predict what possible weaknesses my glaze has?

Without chemistry you'll be a slave to the recipe-exchange or supplier-advice culture.



See your glaze as a formula, not just a recipe
Understand the chemistry and physical properties of your materials

- Display a dialog to supply a material amount based on the amount of oxide needed (formula to batch derivations)
- Open materials dialog to research, edit, add or remove materials.
- Edit each recipe line using this area.
- Get a recipe from the database.
- Copy, move, swap and combine the recipes.
- The Recipe List shows materials and amounts **side-by-side**. Select a line to edit it on the left, drag lines to reorder, double-click a line to edit the material it is linked to.

- Use this to enter and edit target recipes and formulas
- Determine of lines in a recipe participate in chemistry and retotal calculations
- Enter recipe notes and other information on these tabs
- Unity, no unity, analysis or mole% calculation type for each recipe

Materials Dialog

- Count iron as a flux when calculating the formula
- Select from multiple sets of thermal expansion co-efficients
- Select materials database for chemistry lookup

- Attach pictures to a recipe
- Calculated recipe and formula properties
- Change precision of displayed results
- Combine Na₂O and K₂O amounts
- Calculated formulas: Double click a line to view or edit oxide data
- Select material supplying most of a specific oxide
- Select a target or limit formula to display beside other formulas