INSIGHT Success Examples

Cone 10R transparent base



Solved bubbling and crazing problems by calculating how to introduce wollastonite for whiting 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.



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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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.



See your glaze as a formula, not just a recipe Without ceramic chemistry you cannot properly Understand the chemistry and physical properties of your materials answer: • Why is my glaze leaching? Is it likely to leach? · Why is this glaze so touchy and Open materials Edit each Display a dialog to Copy, move, The Recipe List shows materials and difficult to keep consistent? dialog to research. supply a material recipe line Get a recipe swap and amounts side-by-side. Select a line to edit · How do I fix crazing, settling, edit, add or using this from the it on the left, drag lines to reorder, doubleamount based on combine the crawling, scratching, blistering, remove materials. area. database. click a line to edit the material it is linked to. the amount of oxide recipes. pinholing and other problems? needed (formula to How can I change the firing batch derivations) temperature? The gloss? Mattness? SI214W Transparent Cone 6 (G1214W) Why doesn't this colorant work in Use this to enter and edit File Edit Calc Utility Help this base glaze? target recipes and formulas 2 Recipe List Edit Recipe Line How do I substitute materials S/ Line Label 1 $2 \wedge 4$ that are expensive, problematic, Line Label Override Determine of lines in a recipe unavailable? One frit for another? è WOLLASTONITE. 20.00 10.00 ~ WOLLASTONITE participate in chemistry and FRIT 3134 20.00 25.00 · How can I best utilize a raw retotal calculations EPK Kaolin 20.00 25.00 material that I have easy and Materials List Lookup CUSTER FELDSPAR 20.00 inexpensive access to? 25.00 SILICA 20.00 WOLLASTONITE MDT. F-4 FELDSPAR · Can I predict what possible Enter recipe notes 15.00 × weaknesses my glaze has? and other information Amount by Tolerance on these tabs 8 10 -1 Without chemistry you'll 8 be a slave to the recipe-Phantom Unity, no unity, exchange or supplieranalysis or mole% Update advice culture. Static calculation type for Y each recipe Chemistry Recipe Details Notes Pictures الله 🗞 Materials Dialog Count Calculation Type 21 / 2 **Reduction Fired** 🛃 KNaO .000 iron as a Materials Definitions for file: RONROY.TMT (156 materials) **RO Unity** v 1 2 🔺 Oxide Target Item 1 2 🔺 flux when EPK Update Recipe Line More 🔽 Førmula Weight 333.41 410.81 CaO 0.76* 0.71* 0.0-0.65 calculating v **RO Unity** Alternate Names 0.01* 0.0-0.34 Si:Al Ratio 9.45 8.64 MqÓ 0.02*the formula Formula %Analysis 0.51* 0.0-0.32 Weight LOI SiB:Al Ratio 10.04 9.32 KNaO 0.26*Molecular Weight Materials Table BaO Sn02 272.2900 14.66 Thermal Expan... 6.97 6.58 **TiO2** 232.37 Set tr tr CaO 0.006 0.1 Zr02 Cost/lb - USA\$ 0.08 AI203 0.50 0.38-0.75 0.37 Cost/lb-US\$ Туре Select from STANDARD.XML MnO2 SrO Calculated LOI 3.60 4.10 0.0-0.25 0.88 Other ¥ B2O3 0.22 0.34 multiple 1.i20 Unused Imposed LOI 2.80 3.51 SiO2 3.50 4.35 3.0-5.75 CHAMPION BALL (Spinks) <u>Insert</u> Mg0 0.008 0.1 sets of CHERRY ASH WASHED COLMANITE CORN STN RecipéTotal 100.00/ 100.00 Fe203 tr tr COE Set Delete K20 0.012 0.4 thermal 0.0 - 0.34ZnO Copy CRYLOITE CUSTER SPAR DOLOMITE Na20 0.002 0.0 BaO/ 0.0-0.45 expansion INSIGHT 🗙 🗴 1/0-6 in/in/degree C - linear ZnO ENG STN PORC co-efficients <u>Clear</u> EPK F 309 F RCG 2430 F PC2954 (PC1) F12 FUSION F134 FUSION F13 FUSION F13 FUSION F19 FUSION F280 F3110 F3124 F3134 F3185 Fe203 0.012 0.7 Number TiO2 0.010 0.3 30 B2O3 Select Change Combine Calculated Select Attach Calculated Select a Go AI203 1.000 37.5 materials pictures recipe and precision of Na₂O formulas: material target or Filter SiD2 2.091 46.1 database for to a formula displayed and K₂O Double click supplying limit formula РЬО Go chemistry results amounts a line to view most of a to display P205 0.002 0.1 properties recipe beside other lookup or edit oxide specific MDT RONROY ~ Read Only show materials containing data oxide formulas ✓ Go <u>0</u>K Done

any oxide