

Figure S1. Macroscopic pictures of the stones imitated by the studied glasses. (a) *porfido verde antico*, (b) *cipollino rosso*, (c) *giallo antico*, (d) *rosso antico*, (e) *semesanto*, (f) alabaster, (g) agate. Pictures a, b, c, e, f from the Earth Sciences Museum of the University of Bari (Italy) [32]; pictures d, g from the stone collection at the Universitat Autònoma de Barcelona (Spain).

Figure S2. Microphotographs of the scanned polished thin sections of the studied glass samples named after their corresponding imitated stone: (a) PV1, *porfido verde antico*; (b) S, *semesanto*; (c) R, *rosso antico*; (d) G, *giallo antico*; (e) A1 and (f) A2, both imitations of agate or alabaster; (g) R, *cipollino rosso brecciato*; (h) D, *diaspro nero e giallo*; (i) PV2, another version of *porfido verde antico*. All the images share the same scale, except the zoomed area in (e). The different analysed glasses have been indicated according to their identification label used in the article. Please note that in these transmitted light scans, transparent glasses tend to appear white whilst opaque glasses tend to appear dark.

Figure S3. Multivariate chemical data analyses of the studied glasses. (a) Standardized PCA biplot of factor scores for the first two principal components, some samples have been encircled. Inset: PCA biplot of the original compositional variables. (b) HCA dendrogram computed using Euclidean distance and Ward's linkage method. tr: translucent/transparent; op: opaque.

Figure S4. The SO_3 vs. Sb_2O_3 diagram for the analysed glasses, showing a positive correlation.

Figure S5. Different examples of SEM backscattering images of Pb-Fe antimonate crystals in the opaque glasses PV1-op (a,b,c) and PV2-op (d), displaying different idiomorphic degrees.

Figure S6. SEM backscattering images of the different glasses in A1 sample, A1-tr(b) and A1-tr(c) appear indistinguishable.

Table S1. Measured chemical composition obtained by EMP and known values of Corning B [38].

Table S2. Average reduced compositions for each analytical sample as determined by EMP analyses. Cations are expressed in wt% of arbitrary oxides.