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Dear Neville,

Igor passed your Ethiopian beads onto me for comments. We've had them sectioned. I enclose my comments, together with the remnants of the beads and the slides.

## Cream bead.

In hand specimen it is extremely fine grained, consisting of a pure white interior and a very thin (c 0.2 mm) faintly brownish cream skin. The cut surface shows thin brown linear structures that are probably cracks, and which are not to be confused with the more numerous and regular scratches of the cutting saw.

Under the microscope, the interior consists of very fine dark particles in a colourless matrix, which parallel banding produced by fluctuations in the dark particle content. The fine particles are anisotropic hence crystalline, but are not identifiable; the matrix is isotropic hence glass. One or two areas of coarser crystals resemble igneous vesicles, even to being ringed by glass-rich material.

The skin layer is very poor or lacking in the fine dark crystals. It is anisotropic, with microcrystal orientation reminiscent of igneous devitrification textures.

Although I've no experience of pottery etc in thin section, this doesn't look like a rock, and is most probably a fired clay, with a devitrified skin.

## Grey bead.

There are more interior structures than in the cream bead, but these are not evident under the microscope. The microscopic structure is similar though, except that the skin is less extensive, and appears in places to be isotropic.

Overall, this looks like the same sort of product as the cream bead.

Yours,

*Adrian Lewis*

Dr A D Lewis.