

"Genbudo" in the beaker -Analogue model experiment with starch for columnar joints-

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Columnar joints are seen typically inside lavas, dykes and welded tuffs, especially inside basaltic lavas such as "Genbudo" that have well-developed hexagonal columns. To consider the formation process of columnar joints, analogue model experiment are carried out. Mixtures of starch and water are put into the beaker, they are observed about weight decrease and propagation of cracks with drying in the temperature-controlled dehydrator. Cracks are analyzed quantitatively by the image analysis. These experiments show that polygonal columns formed in the beaker are similar to columnar joints, and that forms and size distributions of columns are related with temperature and depth from surface. These can be considered to associate with feature and the formation process of columnar joints.