

A widespread tephra included Osumilite of the Kazusa Group distributed in the Boso Peninsula, Chiba Prefecture , Japan

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The Kazusa Group, widely distributed in the Boso Peninsula is composed of marine sediments at the forearc basin. There is a wealth of stratigraphic geological research and studies regarding this Group, which represents the type stratigraphy of the marine Pleistocene of the Japanese Islands.

In order to characterize the tephra layers within the lower Kazusa Group, authors investigated the thickness, color, shape of volcanic glass, mineral composition, refractive index of volcanic glass and the major and trace element composition of volcanic glass. A tephra layer included osumilite in the lower Ohara Formation of the lower Kazusa Group can be correlated with Bnd2-O1 tephra (2.1 Ma) of the widespread tephra layer distributed in central Japan. Authors named this osumilite tephra Kobato tephra (KB).

KB is very fine ash layer and white colored. The thickness of this tephra is 6-7 cm. This tephra mainly consists of volcanic glass with small amount of hornblende, orthopyroxene and osumilite. The chemical composition of volcanic glass is higher in Al_2O_3 , CaO and Sr than those in other Pleistocene tephra. Bnd2-O1 tephra is found in Plio-Pleistocene sedimentary basins in Kinki, Tokai and Hokuriku area. This widespread tephra consists almost entirely volcanic glass, and is characterized by the presence of osumilite as a phenocryst. The age of this tephra is estimated at about 2.1 Ma (Tamura and Yamazaki, 2004). Features of KB are similar to Bnd2-O1 tephra well, and is comparable, so they are correlated.

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