

Eruptive dates of tephra from Ilopango Caldera, El Salvador, C. A.

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The mineralogical properties and chemical composition of volcanic glass were analyzed for four felsic tephra named TBJ, TB2, TB3 and TB4 from Ilopango Caldera, El Salvador, C. A. by microscopic observation and EPMA analysis. Although these properties of the four tephra are similar to one another, a slight difference of the chemical composition of volcanic glass discovered in this study make it possible to identify each tephra. It enables us to correlate two vitric ash named La Periquera ash and El Refugio ash, which are observed in the area around Santa Ana Volcano, ca. 80 km from Ilopango Caldera, to the TB2 and the TB4 tephras, respectively. Depositional dates of the two tephra, illustrated previously as about ca. 7 ka and 30-45 ka, indicate that four large felsic eruptions occurred in the recent 40,000 years at Ilopango Caldera.

Keywords: TB4 tephra, large caldera eruption, chemical analysis of volcanic glass