



## **Petrogenesis of Trachyte and Rhyolite Magmas on Ponza Island (Italy) and its Relationship to the Campanian magmatism.**

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Magmatism on Ponza island (Italy) has been reviewed, considering both new and literature data. Different origins have been inferred for the two main rock types (trachyte and rhyolite) with the trachyte formed by fractional crystallisation (FC) processes, and the rhyolite by melting of a lower crust component. The two lithotypes evolved through intra-suite FC and they are linked to the rocks of the Campanian Volcanic Subprovince (CVP) on the basis of major, trace element and isotope data extending the Campanian compositional spectrum. To explain the FC and the melting models a tectonic scheme is developed in which most of the FC for the Campanian Volcanic Subprovince took place in the lower crust where magma rises from the upper mantle and is stored in a process of magma accumulation. A subduction-related system has to be taken into account in order to explain the origin of Ponza trachyte and rhyolite, with the rest of the CVP products.