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High Heat Producing Volcano-Plutonic Rocks of the Siner Area, Malani Igneous Suite, Western Rajasthan, India

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ABSTRACT

he volcano-plutonic rocks of the Siner area of the Malani Igneous Suite (MIS) are characterized by high content of radioactive elements (U, Th, K) and are classified as high heat producing felsic volcano-plutonic rocks of A-type granitoid. Microgranite shows highly comparable heat production (26.07 HP) and total heat generation value (62.06 HGU in average) as compared to other granite (HP = 12.73; HGU = 26.57), rhyolite (HP = 4.98; HGU = 11.85) and trachyte (HP = 5.00; HGU = 11.91). The volcano-plutonic rocks of the present show higher average value of total HGU than the average value of 3.8 HGU for the continental crust, which suggests a possible linear relationship among the crustal heat generation of the MIS.

KEYWORDS

Radioactivity; Volcano-Plutonic Rocks; Malani Igneous Suite

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