# Souce materials for Tsukuba granitic rocks based on Sr and Nd isotopic compositions

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Paleogene granitic rocks expose in Tsukuba district, Ibaragi Prefecture. They are divided into seven bodies based on field occurrences, mineralogical feature and geochemical characteristics (Takahashi, 1982). In this study, 15 granitic rocks, 2 metamorphic rocks and 5 sedimentary rocks in the area were analyzed by Sr and Nd isotopic methods.

Isotopic values of the rocks are as follows; Inada granite eSr : +124 ~ +126, eNd : -11 ~ -12, fine grained granodiorite eSr : +37 ~ +60, eNd : -4 ~ -6, medium grained granodiorite eSr : +90, eNd : -9.6, Kabasan granite eSr : +85 ~ +88, eNd : -9 ~ -10, Yamanoo granite eSr : +89 ~ +117, eNd : -11 ~ -18, Tsukuba granodiorite eSr : +96 ~ +97, eNd : -12 ~ -13, Two mica granite eSr : +94 ~ +118, eNd : -10 ~ -12, metamorphic rocks eSr : +182 ~ +188, eNd : -10 ~ -11, sedimentary rocks eSr : +205 ~ +222, eNd : -9 ~ -11, Yamizo Group sedimentary rocks eSr : +306 ~ +373, eNd : -17 ~ -20.

Some granitic rocks from Tsukuba districts are considered as to be derived from early Proterozoic source materials based their very low eNd values (Kawano et al., 1999). From above isotopic data, sedimentary rocks from the Yamizo Group, which have very high eSr and very low eNd values, are estimated one of the source materials for the Tsukuba granitic rocks.