

A potential reference material for in situ U-Pb dating of Columbite-tantalite

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Columbite-tantalite minerals have high U contents associated with low Pb common contents, is a suitable mineral for direct dating of relative ore minerals. In situ techniques like laser ablation inductively-coupled plasma mass spectrometry (LA-ICP-MS) have been widely used over the last decade years to date columbite-tantalite minerals. But, at present, there is still only Coltan 139 as reference material to correct matrix effect for LA-ICP-MS analysis. During our daily analysis, we found a fairly homogeneous coltan KKTH-002 with an concordia age of $203.3 \pm 1.1 \text{ Ma} (N=67)$. It is a potential reference material for in situ U-Pb dating of Columbite-tantalite.

Reference:

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