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甘肃北山火石山哈尔根头口布花岗岩年代学、地球化学及其地质意义 点此下载全文

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摘要：

首次利用锆石LA ICP MS U Pb法测得甘肃火石山东北部侵位于长城系、蓟县系以及志留系中的哈尔根
期（同位素年龄为387.6±8.2Ma），同时发现该花岗岩体内存在晚蓟县世产物（继承性锆石年龄1172±7Ma）。
长花岗岩、二长花岗岩、花岗岩组成，岩石具有高硅（SiO 2 含量为70.28%~79.4%）、富碱（Na 2 O
低铝（Al 2 O 3 含量为8.82%~ 14.05 %）、低Sr（含量为40~150×10 -6 ，平均为101.5×10
3.3、A/CNK值为0.8~1.1，为钙碱性准铝质到弱过铝质岩石；稀土元素具有明显的LREE富集(LREE/HREE=2.89~16.
~25.18)和Eu亏损，相对富集Rb、Th、Ce和Sm，而亏损Ta、Nb、Zr、Hf。综合分析认为该花岗岩为A型花岗岩，产
质背景之中。

关键词：北山 哈尔根头口布 同位素年龄 地球化学 花岗岩

Geochronology and Geochemistry of Haergentoukoubu Granites in the Beishan Area, Gan
Geological Significance Download Fulltext

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Abstract:

LA ICP MS U Pb isotopic dating for zircon separated from the Haergentoukoubu granites yi
and 1172±7Ma. These granites were emplaced in the Changcheng System, Jixian System and Silurain
Beishan, Gausu. The former probably represents intrusive age (early middle Devonian)of the grani
represents the age of late Jixian System inherited zircon inside the granites. Composed mainly of
moyites,monozogranite,granodiorite, the granites are characterized by high SiO 2 (70.28%~79.4%),
2 O (6.52%~9.11%), low Al 2 O 3 (8.82%~14.05%), and low Sr (40~150×10 -6 , averaging 1
elements analysis shows that the average ΣREE is 168.52×10 -6 , the ratios of LREE/HREE and
2.89~16.4, 1.82~25.18 respectively. The REE distribution patterns show that the granites are enri
depleted in Eu, TZ, Nb, Zr and Hf, with LREE/HREE=2.89~16.4, La N /Yb N = 1.82~ 25.18 .
also suggests that the granites are metaluminous to slightly peraluminous calcicolous alkaline se
the tectonic setting of transformation from collision to extension in earlier middle Devonian.

Keywords:Beishan Haergentoukoubu isotopic age geochemistry granites