

蒋少涌, 魏菊英. 辽宁八家子铅—锌矿床的铅同位素研究[J]. 地质论评, 1992, 38(2): 120-130

辽宁八家子铅—锌矿床的铅同位素研究 [点此下载全文](#)

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基金项目:

DOI:

摘要:

笔者对八家子矿床矿石铅、岩体长石铅和高于庄组沉积地层铅同位素的详细研究表明, 矿石铅是由下地壳基
积地层铅和高于庄组沉积矿石铅三元混合的产物。与矿化关系密切的黑云母石英闪长岩浆来自一个铀亏损区, 推
程中同化了部分围岩。矿床成因类型应为沉积—岩浆热液活化型交代充填铅—锌矿床。

关键词: [铅锌矿](#) [矿床](#) [铅](#) [同位素](#)

LEAD ISOTOPIC COMPOSITIONS OF THE BAJIAZI LEAD-ZINC DEPOSIT, LIAONING PROVINCE [Down](#)

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Abstract:

The lead isotopic compositions of ore, feldspar from biotite-quartz diorite and sedimentary r
strata in the Bajiazi ore deposit are studied in detail. The $^{206}\text{Pb}/^{204}\text{Pb}$, $^{207}\text{Pb}/^{204}\text{Pb}$ an
of sedimentary rocks are 16.452--17.871, 15.216--15.348 and 36.584--37.102 respectively. The P
calculated from those data is 1548 Ma. The feldspar leads of biotite-quartz diorite are depleted in
308--16.870 and $^{207}\text{Pb}/^{204}\text{Pb}$ 14.990-15.255 as compared to the Stacey two-stage model, but
 $^{206}\text{Pb}/^{204}\text{Pb}$ 35.565--36.695). The calculated single-stage model age is much older than the true age
characteristics, it may be inferred that the magma originated from the lower crust and mixed with so
rocks in its way of intrusion. The ore leads show a wide variation. The $^{206}\text{Pb}/^{204}\text{Pb}$, ^{207}Pb
(204)Pb ratios of pyrite are 16.162--17.904, 15.149--15.482 and 36.340--37.710 respectively, w
range than those of galena ($^{206}\text{Pb}/^{204}\text{Pb}$ 16.123-16.560, $^{207}\text{Pb}/^{204}\text{Pb}$ 15.149--15.550 and
37.580). According to the three-end member mixing model, the formula of the mixing model of ore le
coefficient of regression of this formula is very high ($r=0.9848$), indicating that the ore leads ha
is concluded that the ore leads are composed of a mixture of the leads of the lower crustal rocks, t
sedimentary sulfides. Based on the lead isotopic compositions and the geological features of the dep
the deposit is genetically a sedimentary--magmatic hydrothermal metasomatic and filling lead--zinc

Keywords: [Lead isotopic](#) [three-end member mixing model](#) [the Bajiazi leadzinc deposit in Liaoning I](#)