

李霓,张柳毅. 2011. 云南腾冲新期火山岩矿物及其熔体包裹体研究. 岩石学报, 27(10): 2842-2854

云南腾冲新期火山岩矿物及其熔体包裹体研究

作者	单位
<a href="#">李霓</a>	<a href="#">中国地震局地质研究所,北京 100029</a>
<a href="#">张柳毅</a>	<a href="#">中国地震局地质研究所,北京 100029</a>

基金项目: 本文受中国地震局地震行业专项项目(201108001、200708-27)资助.

摘要:

腾冲火山群位于我国云南省西部和缅甸的交界处,由黑空山、大空山、小空山、打鹰山、马鞍山等一系列火山组成,是我国著名的第四纪火山群,从喷发活动时间上可分为老期火山和新期火山。前人研究证实,打鹰山、马鞍山和黑空山为新期火山,它们在全新世都有过喷发活动。这些新期火山岩的主要斑晶矿物为辉石、橄榄石和长石,主要的斑晶矿物中都含有熔体包裹体,它们形态多样,分布不规则,且部分显示后期有变化。探针分析表明,新期火山岩矿物中熔体包裹体成分的变化范围大于其基质玻璃成分的变化范围,它们的化学成分分布范围涵盖了玄武粗安岩、粗面安山岩、粗面岩和流纹岩等岩石类型,与腾冲火山区晚更新世以来火山岩的成分分布范围基本一致。根据对新期火山岩斑晶和微晶矿物中熔体包裹体及基质玻璃成分的测试研究,其中挥发分Cl的含量在包裹体和基质中变化不大,但F、SO<sub>3</sub>在熔体包裹体中的含量高于基质,总体上腾冲新期火山喷发时岩浆的脱气率较低,喷发时并未向空中喷出大量气体,推测对当时的气候环境影响不大,但未来喷发的灾害效应不容忽视。

英文摘要:

Tengchong volcanic clusters are located at the border area of western Yunnan Province and Myanmar. They consist of Heikong Mountain, Dakong Mountain, Xiaokong Mountain, Daying Mountain and Ma'an Mountain, etc., which are famous Quaternary volcanic clusters in our country and are divided by oldly- and newly-erupted volcanoes. Previous work testified Daying, Ma'an and Heikong Mountains are newly-erupted ones, which had eruption activities in Late Pleistocene and Holocene epochs. The phenocrysts in these volcanic rocks are pyroxene, olivines and feldspars. The melt inclusions are found in hosted phenocrysts which have different shapes, randomly distributed and have some variations after entrapment. The compositional variation of melt inclusion in newly-erupted volcanic rocks is larger than that of matrix glass. The chemical compositions of melt inclusion and matrix glass have covered basaltic trachyandesite, trachyandesite, trachyte and rhyolite etc., which are consistent with those of Late Pleistocene and Holocene volcanic rocks in Tengchong. According to EMP analyses of melt inclusions in hosted phenocrysts, microcrystals and matrix glass, the content of volatile chlorine doesn't show large variations in melt inclusions and matrix glass, but those of volatile fluorine and SO<sub>3</sub> do have more variations in melt inclusions than in matrix glass. In general, the degassing rate of newly-erupted Tengchong volcanic rocks was low and they didn't emitted more gas to the atmosphere, thus had small effect on the climate and environment by speculation. Nevertheless, future disaster shouldn't be ignored.

关键词: [新期火山岩](#) [斑晶矿物](#) [熔体包裹体](#) [基质玻璃](#) [云南腾冲](#)

投稿时间: 2011-05-30 最后修改时间: 2011-08-22

[HTML](#) [查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

黔ICP备07002071号-2

主办单位: 中国矿物岩石地球化学学会

单位地址: 北京9825信箱/北京朝阳区北土城西路19号

本系统由北京勤云科技发展有限公司设计

[linezing@163.com](#)