地质学报
ACTA GEOLOGICA SINICA

王海雷,郑绵平.青藏高原湖泊水化学与盐度的相关性初步研究[J].地质学报,2010,84(10):1517-1522

青藏高原湖泊水化学与盐度的相关性初步研究

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基金项目：国家自然科学基金项目（面上项目，重点项目，重大项目）

DOI：

摘要：

本文综合分析了青藏高原地区400多个湖泊的水化学成分（Mg2+、Ca2+、Sr2+、Sr/Ca和Mg/Ca）与湖水盐
着湖水变化（不同采样时间和采样点以及蒸发实验）而产生的变化规律。认为：在青藏高原湖泊中， Mg2+与盐
而Ca2+、Sr2+、Sr/Ca以及Mg/Ca与盐度的相关性较弱且不稳定。而在特定的水化学类型的湖泊中，碳酸盐型湖泊
均没有明显的相关性。硫酸盐型湖泊中Mg2+和盐度呈现较高的正相关关系，而Ca2+以及Mg/Ca与盐度的相关性仍
+与盐度呈更强的正相关关系，Ca2+与盐度也呈一定的正相关关系，而Mg/Ca与盐度的相关性依然很弱。在特定的
盐度的相关性仍然不稳定或很弱，而Mg2+与盐度仍然保持明显的正相关关系。在青藏高原利用湖相沉积恢复特定
2+浓度是湖水古盐度一个较好的转换指标，而在应用Mg/Ca这一指标时应谨慎。

关键词：青藏高原 湖泊 Mg2+ Mg/Ca 盐度 相关性

Priliminary study on relationship between hydrochemistry and salinity of lakes in th Plateau

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Abstract:

Relationship between hydrochemistry (Mg2+, Ca2+, Sr2+, Sr/Ca and Mg/Ca) and salinity of mor the Qinghai-Tibetan Plateau were analyzed. And its variation characteristics (differing from diff time, as well as Natural Evaporation) were also discussed. Mg2+ showed a stable positive relation in the Qinghai-Tibetan Plateau. While Ca2+, Sr2+, Sr/Ca and Mg/Ca showed poor and unstable relati water type specified lakes, however, it differed remarkably from different water type lakes. No c between Mg2+, Ca2+ and Mg/Ca and salinity in carbonate type lakes. Mg2+ showed positive relationsl type lakes, and Ca2+ and Mg/Ca remained poor relationship with salinity. While in chloride type l positive relationship with salinity, and Ca2+ also showed positive relationship to some extent wi showed no clear relationship with salinity. In a single lake, Ca2+ and Mg/Ca still showed unstabl with salinity, while Mg2+ still kept remarkable positive relationship with salinity. It was concl indicator for paleosalinity reconstruction in the Qinghai-Tibetan Plateau. Care should be taken w paleoenvironment and paleoclimate.

Keywords:the Qinghai-Tibetan Plateau lakes Mg2+ Mg/Ca salinity relationship