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摘要:

通过火星遥感及火星登陆测量都发现了火星上存在大量的含水硫酸盐, 这些盐类的状态和演化也见证了大浪滩盐湖是柴达木盆地第二大盐湖, 也是中国最为干旱的地区之一, 而且大浪滩盐湖分布有与火星类似的硫酸盐层盐壳, 盐湖结晶盐以及剖面沉积盐类等样品, 进行室内分离、培养及鉴定嗜盐菌研究。结果表明, 大浪滩盐湖的嗜盐菌, 主要类型为 Virgibacillus, Oceanobacillus, Halobacillus, 和 Terribacillus 等。大浪滩盐湖的嗜盐菌, 为探索火星高盐环境中生命存在的形式和机制提供一种类比模式。

关键词: [盐湖](#) [嗜盐菌](#) [火星盐类](#) [天体生物学](#) [类比研究](#)

Isolation and Identification of Halophiles from Evaporates in Dalangtan Salt Lake

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Fund Project:

Abstract:

Sulfate salts have been identified on Mars by spectrometers on orbiters and rovers. These salts reflected the changes of surface environments. Dalangtan Salt Lake is the second largest lake in the world of the driest areas in China. The salts distributed in the Dalangtan Playa have the similar characteristics to the Martian surface. We collected samples such as superficial salt crust of evaporites, salt crystal deposits at the section to isolate bacteria, and the culture and identification of these bacteria. The results showed that different types of halophiles were distributed in salt crystals and salt crusts, that they had high homology with some species of the genera Virgibacillus, Oceanobacillus, Halobacillus. Halobacillus isolated from evaporites of the Dalangtan Playa provide an analog for exploring life on Mars.

Keywords: [salt lake](#) [halophilic bacteria](#) [salts on Mars](#) [Astrobiology](#) [analogs](#)