

## The structure of hot spring microbial mat in terms of spectral mixig ratio of bacteria

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Hot spring microbial mat is a primitive ecosystem constituted by a few species of bacteria. Cyanobacteria, photosynthetic bacteria, and sulfur turf are main component of the mats. These mats are considered as a model of ecosystem at the Precambrian Earth.

A microbial mat in various colors have developed on the wall of a small dam at Nakabusa Hot Spring, where hot spring water spout out from the block joints of the wall. We measured absorption spectra of the mat to estimate the mixing ratio of Cyanobacteria and Chloroflexus using a portable spectrometer. Surface temperature of the mat is also measured. We clarified the relationship between the water temperature and the distribution of the bacteria.