

CRYSTALLIZATION OF EVAPORITES IN SALT WORKS

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EXTENDED ABSTRACT

The salt works of Secovlje are producing salt since the 13th century in the same manner. The evaporation procedure takes place on naturally grown cyanobacterial mats which stabilize the bottoms of the evaporation pans. The salt works are a natural model for the study of microbiology and geochemistry of evaporite sequences. The physicochemical conditions during the evaporation of sea water are modified by the activity of cyanobacteria.

The precipitation of CaCO_3 , $\text{CaSO}_4 \cdot 2 \text{H}_2\text{O}$ and NaCl takes place under natural conditions from oversaturated solutions contrary to stable equilibrium conditions. The geochemical and microbiological conditions in the evaporation pans are comparable with the massive salt formations in the geological past.

The film (IWF, DVD) "*Crystallization of evaporites in salt works*" (17 min.) documents the procedure of the salt production under natural conditions and is a part of "the *Trilogy of Evaporites*".