

INYOITA -Ca[B₃O₃(OH)₅].4H₂O- DE LAGUNA SALINAS, PERU

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Abstract

A mineralogical description of inyoite that was rediscovered at Laguna Salinas in Peru is presented. The first known locality with primary inyoite originally discovered by S. Muessig was localized by one of the authors (RNA) after 35 years. Laguna Salinas is a playa-lake deposit in the Andes Mountains of southern Peru, at an altitude of 4,200 m.a.s.l., located 80 km eastward of Arequipa city. Stratovolcanoes, arid climate, thermal springs and a closed basin with internal drainage are the main features of the region. Volcaniclastic materials and evaporites form the refill of the basin. Borate (ulexite, and minor inyoite), sodium sulphate (mirabilite) and sodium chloride (halite) are widely distributed. In order of reserves, Laguna Salinas is the biggest boron deposit of Peru and the most important playa ulexite deposit technically evaluated in South America today. In this paper, we made a new description of the occurrence, crystal morphology, physical and optical properties, chemical analysis, infrared absorption spectrum and X-ray diffraction of the specie.