

# HYDROCHEMICAL CHARACTERIZATION OF MINING LECHATES THAT DISCHARGES IN THE CHANZA RESERVOIR

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## **Abstract**

The Iberian Pirite Belt is one of the largest metallogenic provinces in the world whose massive sulphides are being exploited since prehistoric times. As a result of this intensive development of mining operations, a great volume of waste rock dumps, mining tails and dams were created. In the absence of actions to prevent and remediate the pollution, acid mine drainage is generated, flows to the natural watercourses and causes a strong decrease of the water quality. This problem has remained to nowadays and due to the absence of legal responsibility, it should be managed by the agencies that are responsible for territorial management.

The present work is developed in the river basin of Trimpancho and its objective is a geological and mining characterization of the area as well as an analysis of the changes in the hydrochemical characteristics of the stream caused by the lechates from the waste rock dumps of four midsize mines: Volta Falsa, Trimpancho Group, La Condesa and Nuestra Señora del Carmen, which are currently abandoned and have a high degree of deterioration, generating serious conditions in the environment. Note that these waters, without any treatment, are incorporated into the Chanza reservoir, which was built for human supply.

For this characterization sampling and analysis of water were carried out at several selected sites. The results were subjected to a statistical study that has checked the multivariate analysis as an usefool tool for environmental assessment in this type of affected scenarios, contributing to an advance in the state of the art.