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Geochemistry of acid waters in the old copper mine of Libiola (Liguria, Italy)

The iron-copper mineralisation of the old mine of Libiola (Liguria, Italy) is composed of sulphides (pyrite and chalcopyrite) in the Jurassic ophiolite of braco. Two metalrich acid waters (pH=2.7 and 6.4) and relative deposits from this mine have been analysed. These mine waters are compared with the spring waters collected out of the ore bodies, in the surrounding basalts and serpentinized peridotites. The chemical compositions of waters appear to be the result of the competition between the dissolution of sulphides, contained in the ore bodies, and the dissolution of surrounding silicated rocks.

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