

Hot spring arsenic distribution in the Andes Cordillera (18-52oS)

¹Fernandez-Turiel J.L., ²Gimeno D., ²Garcia-Valles M.T., ³Galindo G.,
⁴Córdoba G. del V., ⁵Saavedra J., ²Ruggieri F. and ²Polanco E.

¹Institute Earth Sc. J. Almera, CSIC, Solé i Sabaris s/n, 08028 Barcelona, Spain. E-mail: jlfernandez@ija.csic.es

²Fac. Geología, Universitat de Barcelona. Spain

³Fac. Cs. Exactas y Naturales, Univ. Buenos Aires, Argentina

⁴Fac. Tecnología y Cs. Aplicadas, Univ. Nac. Catamarca, Argentina.

⁵IRNASA, CSIC. Salamanca, Spain

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ABSTRACT

One of the most extensive areas around the world where the low quality of groundwater due to the presence of high concentrations of arsenic of natural origin is a major concern is Argentina-Chile. The exhaustive knowledge of the geological, hydrogeological, and geochemical setting can be very effective to define an alternative strategy to mitigate the arsenic problem in water. The magnitude and extension of the arsenic affected areas is not well known. In order to understand the source of the arsenic, the development of a database of thermal waters in the Andean region is in progress. We present in this work the assessment of more than 360 hot springs and wells located in the Andes between 14 and 52oS of latitude. This information comes from projects carried out by our team in the area and from references. The hot waters with higher concentrations of arsenic (50-30,000 µg/l) are mainly located in volcanic areas with hydrothermal activity of the Andes Cordillera between 14 and 28oS.