

## Physico-Chemical Quality Study of Geothermal Waters of the Region Djérid-Tunisia

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**Abstract :** Tunisia is a semi-arid country on  $\frac{3}{4}$  of its territory. It is characterized by the scarcity of water resources and accentuated by climate variability. The potential water resources are estimated at 4.6 million m<sup>3</sup> / year, of which 2.7 million m<sup>3</sup> / year represent surface water and 1.9 million m<sup>3</sup> / year feed all the layers that make up the renewable groundwater resources. Water available in Tunisia easily exceed health or agricultural salinity standards. Barely 50% of water resources are less than 1.5 g / l divided at 72% of surface water salinity, 20% of deep groundwater and only 8% in groundwater levels. Southern Tunisia has the largest web "of water in the country, these waters are characterized by a relatively high salinity may exceed 4 gl-1. This is the "root of many problems encountered during their operation. In the region of Djérid, Albian wells are numerous. These wells debit a geothermal water with an average flow of 390 L / s. This water is characterized by a relatively high salinity and temperature of which is around 65 ° C at the source. Which promotes the formation of limescale deposits within the water supply pipe and the cooling loss thereby increasing the load in direct relation with enormous expense and circuits to replace these lines when completely plugged. The present work is a study of geothermal water quality of the region Djérid from physico-chemical analyzes.

**Keywords :** water quality, salinity, geothermal, supply pipe

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