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characterization and quantification of clay minerals by x-ray diffraction

The work carried out is part of a global study carried out on the marly-clay formations of Tizi-Ouzou. Indeed, marls known as “evolving materials” exhibit very specific behaviors which evolve differently over time, particularly in the presence of water.
this work tends to the mineralogical characterization of these marly formations of the Tizi Ouzou basin, the typology and the quantification of clay minerals based on X-ray spectroscopy.
it is a non-destructive technique and allows us to recognize the symmetry of the crystal, to determine its structure, the parameters of its lattice and to identify the crystal. The results obtained following the processing of the samples by the XRD made it possible to characterize and identify the nature and the mineralogical composition. And classified them according to the content of calcite and clay minerals based on Jung’s classification. Most of the samples are classified as much as clay limestones, marls and clay-limestone. So we conclude that the marls of the region of study are formed mainly of carbonates.

Summary

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