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Characterization of the Algerian diatomite by XRD, FTIR and XRF For use in water filtration

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Abstract : Diatomite (Kieselguhr) consists of fossilized diatoms residues of hard-shelled algae type, is used as a filter aid, liquids absorbent, reinforcing filler in plastics and rubber, porous support for chemical catalysts, and a thermal insulating. The purpose of this paper is studying the structural and chemical composition of this material; by means of elemental analysis, in order to identify and quantify the chemical elements and the structural composition of the crude diatomite of the Sig region (western Algeria) by analytical methods such as X-ray diffraction (XRD), infrared spectroscopy (FTIR), X-ray fluorescence (XRF) in order to be exploited in a large scale for water filtration.

Keywords : diatomite, characterization, structural, chemical composition, filtration.