

Agriculture Water Quality Evaluation in Minig Basin

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Abstract : The problem of water in Tunisia affects the quality and quantity. Tunisia is in a situation of water shortage. It was estimated that 4.6 Mm³/an. Moreover, the quality of water in Tunisia is also mediocre. In fact, 50% of the water has a high salinity (> 1.5g/l). There are several parameters which affect water quality such as sodium, fluoride. An excess of this parameter may induce some human health. Furthermore, the mining basin area has a problem of industrial waste. This problem may affect the water quality of the groundwater. Therefore, the purpose of this work is to assess the water quality in Basin Mining and the impact of fluorine. For this research, some water samples were done in the field and specific water analysis was implemented in the laboratory. Sampling is carried out on eight drilling in the area of the mining region. In the following, we will look at water view composition, physical and chemical quality. A physical-chemical analysis of water from a survey of the Mining area of Tunisia was performed and showed an excess for the following items: fluorine, sodium, sulfate. So many chemicals may be present in water. However, only a small number of them immediately concern in terms of health in all circumstances. Fluorine (F) is one particular chemical that is considered both necessary for the human body, but an excess of the rate of this chemical causes serious diseases. Sodium fluoride and sodium silicofluoride are more soluble and may spread in animals and plants where their toxicity largest organizations. The more complex particles such as cryolite and fluorite, almost insoluble, are more stable and less toxic. Thereafter, we will study the problem of excess fluorine in the water. The latter intended for human consumption must always comply with the limits for microbiological quality parameters and physical-chemical parameters defined by European standards (1.5 mg/l) and Tunisian (2 mg/l).

Keywords : water, minier basin, fluorine, silicofluoride

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