

Drinking Water Treatment Processes of Oued El Athmania, Mila: Evaluation, Control and Quality

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Abstract – A drinking water treatment plant, intended for consumption, must produce, under all circumstances, water that meets the standards. While the raw water may have variable characteristics before treatment, to cope with these variations, the design of the installation can use several treatment processes such as coagulation flocculation, decantation, filtration,.....etc..

The experimental study of this research was carried out on the drinking water treatment plant of Oued El Athmania, Mila (36° 27' 1.01" N; 6° 15' 51.98" E) and these physicochemical and bacteriological analyses were carried out on samples taken has 4 levels of the treatment station: (1) raw water , (2) decanted water, (3) filtered water and (4) treated water.

The results obtained clearly show that the different processes applied on the treatment chain have a remarkable and variable effect on the quality of the water, as an example the water turbidity were 15.7, 1.8, 1 and 0.61 NTU for the raw water, decanted, filtered and treated water, respectively. The characterization of the treated water (pH, temperature, conductivity, salinity, partial and total alkalinity, organic matter, turbidity, total hardness, color, chemical oxygen demand, nitrite, nitrate, aluminum, total and fecal coliform,) confirms that this water is potable.

Keywords – Water Treatment, Turbidity, Process, Characterization, Pollutant, Quality