

STUDY OF *CYCLOTELLA* (KÜTZING) BRÉBISSEON OF DIATOMS AND THEIR RELATIONSHIP WITH SOME OF PHYSICO- CHEMICAL FACTORS OF WATER IN SIAHROOD RIVER, IRAN

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The Siahrood River is one of the important rivers of the Caspian Sea water basin. This river originates from the Alborz Mountains. It is the most important source of water for agriculture and economic purposes in Ghaemshahr (Mazandaran province). Therefore, a study about the microorganisms in this river is very important for water quality monitoring. Diatoms are the major constituent flora in aquatic ecosystems such as freshwater habitats. Samples were taken from stones and sediments and immediately fixed with formaldehyde 4% in situ. For exact recognition, permanent slides were prepared using the Patrick & Reimer procedure. Identification of diatoms was done by means of light microscope and specialized recognition keys. For the study of diatom communities in aquatic ecosystems, a counting method is used because in this method, identification and determination of diatom communities and morphological variations of species are better known. Simultaneously, physiochemical analysis, temperature, pH, and EC were determined. In this research 4 species were identified belonging to the *Cyclotella* genus (*C. meneghinana*, *C. operculata* and *C. steriata* and *C. glomerata*). *C. meneghinana* was dominant in the whole study period. Likewise, this study revealed that the density of diatom species was higher with increased temperature, high electrical conductivity and a pH of 7.5.