

# The Bio-Ability of Some Types of Microalgae to Biological Treatment of Domestic Wastewater.

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- **Abstract:** Three types of microalgae were used to determine their ability to treat domestic waste water which are *Chlorella protothecoides*, *Scenedesmus simris*, *Tetraselmis suecica* algae samples were collected from three waste water treatment plants. The algae recorded the highest percentage removal of the physical factors that were studied, which are electrical conductivity, salinity, total dissolved solids, total suspended solids and volatile suspended solids with percentages of (30%, 42%, 43%, 87%, 82% and 79%) respectively, while the lowest removal percentage of these elements reached their values (9%, 5%, 20%, 79% and 75%) respectively. The chemical factors included PH, alkalinity, calcium ions, total hardness, dissolved oxygen and biological oxygen demand the highest removal percentage of these elements from waste water was (23%, 75%, 50%, 48% 52% and 41%) respectively, while the lowest removal rate was recorded for these elements (12%, 46%, 33%, 39% 38% and 29%) respectively. The algae used in the subject of the research recorded a high removal rate of nutrients present in the waste water which included nitrates, phosphorous and phosphates as the highest removal percentage of these elements reached (47%, 53% and 61%) respectively, while the lowest removal percentage of these elements reached (29%, 42% and 44%) respectively.
- **Keywords:** Microalgae, *Chlorella protothecoides*, *Scenedesmus simris*, *Tetraselmis suecica* algae, Chemical factors