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Removal of Fluoride in Polluted Water using Gular Plant (*Ficus recemosa*) Leaves as Bio-Adsorbent

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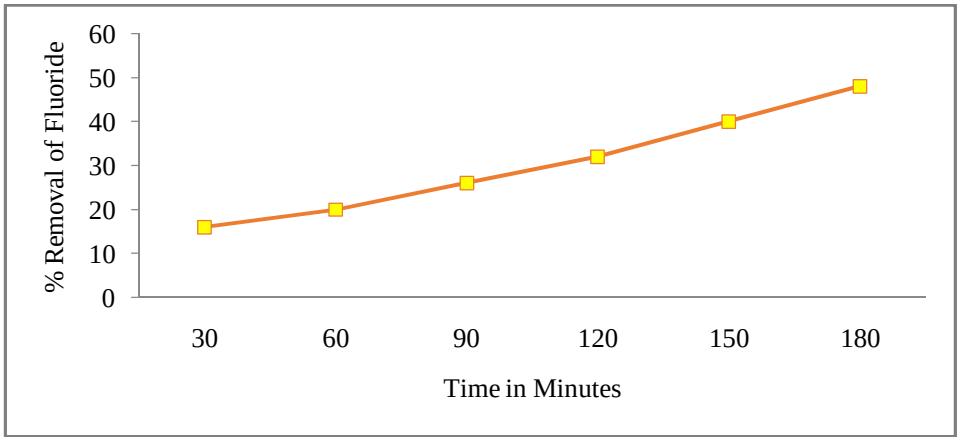
ABSTRACT

Fluoride is a poison associated with cancer in young men; Osteoporosis; Low I.Q; And hip fractures accumulate in our bones in the elderly, to name a few, the permissible limit of fluoride concentrations in drinking water is 1.5 mg L^{-1} according to WHO. Therefore, knowledge of using the best technology with maximum efficiency is required, removing its efficiency. Among various techniques, adsorption plays a major role in fluoride removal. As cost is an important consideration in most developing countries, efforts have been made to explore the possibility of using various low-cost advertisers that are abundant, readily available, and derived from waste materials. The "M. S. Swaminathan Research Foundation" (MSSRF) showed drumstick seeds to have significantly higher deflation capacity than active alumina. In the present work, the use of Gular Plant (Ficus recemosa) leaves as low cost adsorbents and their feasibility for the removal of fluoride from ground water is studied with various affecting parameters like different pH and contact time.

Graphical Abstract



Defluoridation by Gular plant (*Ficus recemosa*)

Keywords: Adsorption, Bio-adsorbent, Efficiency, Defluoridation, Low Cost Adsorbents.