



Reduction of Nitrate Level using Lowcost Adsorbents

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Abstract:Nitrogen are present in the form nitrate and nitrite in Industrial effluent or waste water like Dairy Industry, Fertilizer Industry etc. The use of low cost adsorbent has been investigated as a replacement for the current expensive method of removing nitrate from waste water. The objective of this work is the study of adsorption of nitrate containing solution, by using low cost adsorbent Casurinas Dried Leaf (Sample I) and Activated Carbon (Sample II). Nitrate solution with known concentration had been prepared. Then liquid phase adsorption has been carried out by using these two adsorbent and result has been investigated by batch mode. A colorimeter is used to estimate the Nitrate Concentration by the colour formation undergone by PDA method. Parameters such as adsorbent dose, effect of time have been observed through Batch Adsorption. In present study, it is observed that adsorption showed 25% adsorption for Sample I by using it at the amount of 1g to 4g and for sample II it is quite higher, 91% by using it in 0.1mg dose and shows maximum 96.4% adsorption when 0.4g is added.

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