

**TURBIDITY REMOVAL OF WASTE WATER
USING BIO MATERIALS**

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by

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Abstract

Existing technologies for turbidity removal from waters and wastewaters are often ineffective, expensive and unavailable in developing countries. The necessity to investigate an inexpensive and effective alternative for turbidity removal from waters becomes inevitable. Adsorption is an emerging field in this regard and has great potentials for application in developing economies. It involves the use of living or non-living biological materials for pollutants' removal from aqueous solutions and industrial effluents. This research therefore focuses on developments in the use of bio materials for the removal of turbidity of waters and wastewaters.

The plant materials such as seeds of *Moringa oleifera*, seed coat of *Elettaria cardamomum*, seeds of *Strychnos potatorum*, flower of *Osbeckia aspera* and fruit of *Phyllanthus emblica* were washed and dried separately. Crushed plant materials were separated by using sieve shaker into series of different mesh sizes and loaded into the glass column. Synthetically prepared turbid water sample was passed through the glass column and turbidity removal capacities of the plant materials were checked. Seeds of *Moringa oleifera*, seed coat of *Elettaria cardamomum*, seeds of *Strychnos potatorum* were effectively reduced the turbidity and the most effective mesh size was 0.6 mm mesh size. All the materials effectively worked under the 0.6 mm mesh size.