

Water Pollution: Impact of Pollutants and New Promising Techniques in Purification Process

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ABSTRACT Water is a critical resource in the lives of people who both benefit from its use and who are harmed by its misuse and unpredictability (flooding, droughts, salinity, acidity, and degraded quality). Water is a finite and vulnerable resource. Consequently, consumption of polluted water puts lives and livelihoods at risk because water has no substitute. There are many ways in which water intended for human consumption can get polluted. These include wastes from industries like mining and construction, food processing, radioactive wastes from power generating industries, domestic and agricultural wastes and by various microbiological agents. Nowadays, water is being purified by various methods but research is being conducted to look for more reliable and cheaper methods that can purify water at an affordable cost. Various techniques have been developed like utilizing rechargeable polymer beads, seeds of *Moringa Oleifera* tree, aerobic granular sludge technology, resin based treatment and two-pronged water treatment technology.