The Use of Solid Wastes as Oil Spill Mops on Aquatic Environment

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Abstract: Powders of chicken feather, goat hair, corncob and cotton were used to mop spills of crude oil, diesel, kerosene and petrol from water surfaces. It was observed that the four sorbents mopped up appreciable quantities, often more than 500% of their weight of hydrocarbon sorbents within the first one hour of contact. The ability of the sorbents to absorb the hydrocarbon liquids is in the order: feather > cotton > goat hair > corncob. Further, it was observed that large quantities of the absorbed oil were recovered from the sorbents by allowing them to drain by mere pressing. This is due to the fact that the weak physical adhesive forces binding the hydrocarbons to the sorbents become easily broken on pressing. Thus the high degree of adsorption and recovery suggest that the four sorbents have good potentials as oil spill mops in the water environment.

Keywords: Sorbent, oil spill, environment, hydrocarbon, cotton

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