

Skylar Jaramillo
Powerful Polymers

The ocean and its ecosystem are irreplaceable, making the health of our oceans a top priority. Oil spills jeopardize this delicate balance. The purpose of this experiment was to determine which substance would be the most effective at absorbing and retaining oil. Marvin's Mystery Oil was substituted for crude oil. Both dyed and non-dyed hair in a knee-high nylon, straw, sand, sawdust, a knee-high nylon, and Enviro-Bond 403 were tested for absorbency and retention of oil. Each of the substances was placed on top of the oil for five minutes, observed, and collected. The final mass of each trial was measured for absorbency. The collected substances were placed on wax paper to rest and monitor oil retention. The non-dyed hair cased in knee high nylon was the most absorbent substance, while Enviro-Bond 403 retained the most oil. The least effective substance overall was sand. Revisions to improve the experiment include eliminating substances that are denser than water, including a sleeve to contain all substances, further investigation of sleeve materials, more hair types and larger sample amounts of hair. Hair clippings are a natural renewable resource that could possibly be used to clean water polluted by oil spills.