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Got Oil?

The purpose of this experiment was to find out which natural fabric soaks up the most oil, both when it is wet and when it is dry. The results may be used to clean up oil spills and better protect our environment. This experiment tested five different fabrics: cotton, silk, wool, linen and jute. Four samples of each fabric were soaked in oil to see how much each absorbed. Two were tested wet and two dry. Soak time and drip time were carefully controlled. The oil absorbed was measured as the difference between wet weight and dry weight. This was divided by the dry weight so the results didn't depend on the size of the sample. It was predicted that linen would soak up the most, since the research said it was really absorbent. The results, however, showed that wool absorbed the most oil, both wet and dry. This was a surprise, and the reason isn't yet understood. Perhaps this may be caused be the surface tension on the wool fibers. Another surprise was that jute behaved differently than the others. It soaked up more oil wet than dry. Finally, wool is very expensive, so cost should be considered. Additional experiments and improvements are suggested.