

Viscous sand, or kinetic sand

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Słowa kluczowe:

viscosity, polimery

DZIEDZINA:

Chemistry, Sensor technology

Cel doświadczenia:

The purpose of the experiment is to prepare kinetic sand, i.e. soft sand that is not loose. The experiment is also aimed at making club members familiar with the notion of viscosity and the phenomenon of using polymers as an adhesive (binder). Kinetic sand is a plastic material developing creativity and manual skills.

Spis materiałów:

1. liquid glue
2. a dye
3. sand (of any choice but the finer, the better)
4. washing liquid

Etapy realizacji:

1. If you want coloured sand, mix a spoonful of glue with the dye in the first step.
2. Then add a spoonful of washing liquid and mix thoroughly.
3. To the mass thus prepared, add a spoonful of sand and rub vigorously.
4. Rub in more sand in portions until the material can be easily divided.
5. Compare ordinary sand with the sand into which a polymer was rubbed.

Pytania do doświadczenia:

1. What function does the polymer additive serve?
2. How do the properties of sand change when a polymer is added to it?

Opis zjawiska:

Ciekawostki:

1. Carnivorous plants, and more specifically sundews, excrete on their leaves a sticky fragrant substance which attracts insects and tiny animals. When an insect lands on such a sticky leaf, it cannot free itself because it is held back by the sticky excretion.
2. Pitch is a black amorphous mass that is actually a liquid with a very high viscosity. It is estimated that this viscosity is approximately 230 billion times that of water. The experiment to prove that pitch is a liquid is the longest experiment in the world. It was started in 1927 by Professor Thomas Parnell from University of Queensland. He placed pitch in a glass funnel

and it took three years before the pitch filled the stem of the funnel. It takes approx. 10 years for a drop of pitch to form.