

Regeneration of the products absorbed by the sorbent PPU-GCW

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Abstract

The paper presents research on the extraction of oil from the saturated sorbent PPU-GCW, obtained on the basis of polyurethane foam and buckwheat husk waste (BH). Methods for extracting the absorbed oil: squeezing and centrifugation were evaluated.

Depending on the physical and chemical properties of oil the extraction by squeezing takes place with ~50-85%. With the number of cycles of absorption – squeezing the sorption capacity reduces, but after 10 cycles of squeezing it remains at the level of 50%. The best indications of oil capacity for the sorbent at its repeated use are observed at rest after each cycle of squeezing in in the period of one hour. The smaller the sorbent, the greater the amount of oil recovered.

It has been established that for the extraction of the absorbed product it is also efficient to use the method of centrifugation. The amount of oil recovered makes up ~80-85%. The highest amount of oil is extracted during the first 15-20 minutes.