

## Bifunctional sorbent for sewage treatment obtained from sapropel

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### Abstract

It has been shown that by heat treatment of sapropel on air at the temperature of 300-350 °C the bifunctional sorbent can be obtained. The sorbent is capable of extracting organic substances and ions of metals from water solutions. Sorbent capacity on ions of nickel(II) makes up  $51.0 \pm 2.0 \text{ mg g}^{-1}$ , the sorption value of petroleum products is equal to  $33.1 \pm 1.2$  of  $\text{mg/g}^{-1}$  at their initial concentration of  $1.0 \text{ mg ml}^{-1}$ . On the example of washing water of nickeling workshop section of radio plant it is established that bifunctional sorbent is capable to extract at the same time ions of metal and petroleum products from water solutions. Comparison is made of characteristics of the sorbent obtained during thermal treatment of sapropel in the air environment at the temperature of 300 °C and the sorbent obtained by carbonization of sapropel in the inert environment at the temperature of 700 °C.