The aim of the article is to evaluate the lake deposits of sapropel of the Rivne region in order to find out possible directions of rational use of their resources in various sectors of the economy, with preservation of protective measures and improvement of the ecological status of lakes.

Methodology. The article uses general scientific methods of research. The author's materials of own researches and stock materials of SSPE «Geoinform of Ukraine» are involved.
Results. The estimation of resources of lakes sapropel of the Rivne region shows that the reserves of sapropel are estimated in 37 lake deposits in the region, in which there are 13900,0 thousand tons of sapropel. Each origin is characterized by specific properties and an individual chemical sapropel composition. Most basins have reserves of more than 100,0 thousand tons, area up to 0,5 km$^2$, average depth of water up to 4 m and capacity of sapropel more than 1 m. Such characteristics are quite sufficient and profitable for industrial development of sapropel deposits. An urgent need for the development of sapropel deposits in the region also causes intensive processes of silting water, as a result they lose their water, fishery and recreational value.

Scientific novelty consists of elucidating the composition water and physical properties, stock estimating and geo-ecological aspects of extraction, as well as identifying perspective directions for using the resources of the lake deposits of the gray region.

Practical significance is the possibility of using the resources of lake deposits of sapropel of the Rivne administrative region in various branches of economy (agriculture, industry, geology, medicine and recreation). The obtained results are important for rational use of sapropel resources of the region and justification of the strategy and actions for their protection. The systematized information about lake deposits of sapropel will be of interest to potential investors.

Keywords: sapropel, bottom sediments, lake deposit of sapropel, Rivne region.

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