

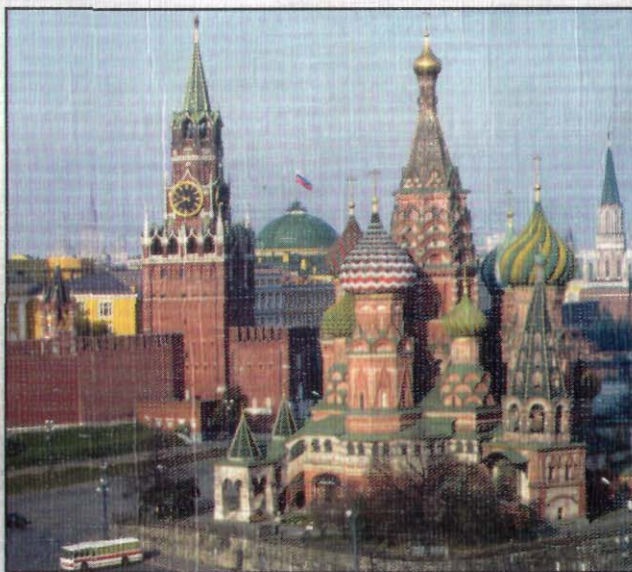
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**ABSTRACTS  
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**HPLC *in situ*:  
fate of di-(2-ethylhexyl)phthalate in Lake Baikal ecological system**

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HPLC is a powerful analytical method for ecological investigations. It allows studying migration of water masses in aquatic ecosystems using chemical tracers. We propose to consider as one such tracer the di-(2-ethylhexyl)phthalate (DEHP) – this is a widely distributed plasticizer of polymers. Background concentrations of DEHP in natural waters are at present 0.1÷1.0 µg/l. This substance is chemically resistant in the environment, it is hydrophobic, and it is adsorbed actively on solid surfaces. The latter property does not allow transporting water samples from sampling site to the laboratory: phthalate concentration can considerably change.

We have developed a HPLC procedure to determine DEHP in water which is convenient to be applied in laboratories on board a ship, in a car and in the field using a portable liquid chromatograph "Milichrom A-02" ("EcoNova Ltd.", Novosibirsk, Russia). A large volume of water (10÷50 ml) was injected directly into the analytical column 2x75 mm (Nucleosil® 100-5 C18) at 200÷1000 µl/min (50°C). Separation conditions: the eluent – MeOH:H<sub>2</sub>O (90:10); the flow rate – 200 µl/min; detection at 200÷210 nm. The method allows determining DEHP in Baikal water, snow, ice, rain at the level of 0.1 ppb [1].

This method was approved for 5 years during an investigation of fate of DEHP in Lake Baikal region and more then 1000 analysis were done.

Levels of DEHP in lake surface and deep water, in riverine water, snow and ice, bottom sediments, fish, and seal fat were determined.

The results obtained allow creating a model reflecting the fate of phthalate in Lake Baikal ecosystem.

1. G.I.Baram, I.N.Azarova et al. *J.Analyt.Chem.*, **55**, No.8 (2000) 750 (Trans. from *Zhurnal Analit. Khimii*, **55**, No.8 (2000) 834).