Methods and objects of chemical analysis, 2016, Vol. 11, No. 1, xx–xx

Monitoring and Disperse-phase Distribution of Organochlorine Pesticides in Natural Water

M.V. Milyukin*, M.V. Gorban

A.V. Dumansky Institute of Colloid Chemistry and Water Chemistry of National Academy of Sciences of Ukraine, blvd. Vernadsky 42, Kyiv, 03680 Ukraine; *e-mail: m_milyukin@mail.ru

Recieved: April 17, 2016; Accepted: June 08, 2016
doi: xxxxxxxxxxx

Monitoring of organochlorine pesticides (OCPs) was carried out and disperse-phase distribution of them was studied in natural water from Dnieper River in Kiev region during the period between 2011 and 2013 years. Total concentration of OCPs (α-HCH, β-HCH, γ-HCH, HCB, heptachlor, aldrin, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT) range from 1.4 to 17.1 ng/dm^3. Concentrations of compounds of groups of HCH and DDT are situated in intervals respectively: 1.42–6.43 ng/dm^3; 1.26–15.76 ng/dm^3.

It was indicated that dominant part of OCPs is associated with suspended particles: 16–25% — at thin and 37–52% — at rough fractions. The dissolved fraction of OCPs is accounted only 24–38%.

Keywords: natural water, organochlorine pesticides, monitoring, disperse-phase distribution, GC/MC, GC/ECD, Dnieper River