Geophysical Research Abstracts,
Vol. 10, EGU2008-A-01812, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-01812
EGU General Assembly 2008

The analysis of POPs in ground sediments of Kura river basin by extraction spectral-photometry

D. Harutyunyan (1), I. Ohanyan (2).

Centre for Ecological Noosphere Studies of National Academy of Sciences, Yerevan, Republic of Armenia (harutyunyan_david@yahoo.com / Fax: +37410 580254)

Absorption spectral-photometry within ultraviolet (UV) and visible area appear to be relatively old and established classic physical method successively employed in organic chemistry. This work aims to determine POPs concentration in ground sediments in Kura River Basin, when spectral-photometry is chosen as qualitative analysis method. Spectral-photometry advantaged with its various essential usages, which are methods universality, relative high sensitivity, correctness of determination and also quite cheap apparatus. Spectral-photometric methods usually are comfortable and available ones for analysis of trace amounts of POPs following their concentration (extraction photometry). Because of photoelectric equipments economize the time for analysis, thus they have wide utilization.

Theoretical researches compose their special part in this work. When benzene or any other aromatic compounds are being replaced with chromophore groups (-OR, Cl, phenyl), the spectrum moves batochrome and intensity rises. It must be mentioned that benzene ring in congeners keeps the tiny structure and is sensitive from solvent impact. Many substances of this range are carcinogenic materials and absorption spectrums used for their analysis are studied thoroughly, except for POPs.

Absorption UV electronic spectrums may be necessary as during identification problems as in quantitative analysis only, if respective standards are available. UV spectrums generated are for summary picture, but emanating from their shape, we can imagine about the representation of pollutants.