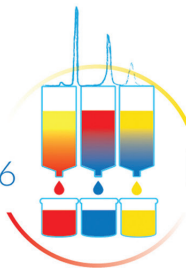


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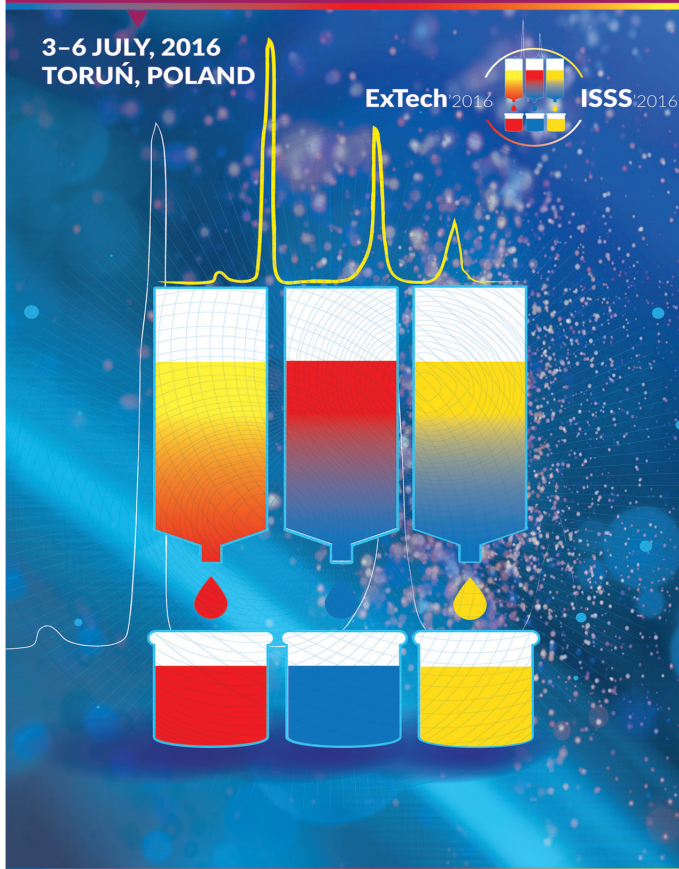
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**18TH INTERNATIONAL SYMPOSIUM ON
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Abstract Book

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S1-P4**Method of fast determination of petroleum contaminants****M.M. Sergazina, M.M. Yelemessova, M.B. Alimzhanova***Al-Farabi Kazakh National University, 71 Al-Farabi ave., Almaty, Kazakhstan
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Nowadays oil spill pollution is a complex environmental problem, and for Kazakhstan, it is one of the priority ecological problems at the oil extraction sites. Pollution by petroleum occurs due to the growth of hydrocarbon production, and because of non-compliance with technical regulations of production, processing and transportation. Contamination caused by crude oil and petroleum products will contain a variety of hydrocarbons. Among of them PAHs belong to a group of over 100 hazardous substances of organic pollutants, consisting of two or more fused-benzene aromatic rings. When petroleum hydrocarbons contact to the ground, can cause a change to their physical - chemical properties, lead to a decrease to the functional activity of microbiota soil biocenoses. High concentration levels of hydrocarbons present in contaminated sites could pose a health risk to humans, plants and animal lives. The importance of control over the content of pollutants in the environment constantly poses ecological and analytical chemistry tasks of improving analytical techniques. Currently, one of the effective analytical techniques used to carry out such determination is gas chromatography coupled with mass – spectrometry.

In this research it was used to analyze selected petroleum samples from different deposits of western and southern regions of Kazakhstan, and have been studied the transformation processes of hydrocarbons in oil-contaminated soils through time. For data processing, it was developed an automated software by our research group, called as “Petrol Analysis”. The basis of calculation of software is technique of class analysis of aromatic and saturated hydrocarbons. For obtaining finite ionization of specific classes calculated partial sums of certain peaks, inverse matrices and their works on the diagonal elements of the calibration matrix [1]. The subsequent normalization of the results reflects the fractional composition (volumetric fraction of a percentage) for each class of compounds: paraffins, condensed cycloparaffins, condensed cycloparaffins with two rings, condensed cycloparaffins with three rings, benzenes, naphthenobenzenes, dinaphthenobenzenes, naphthalenes, acenaphthenes, fluorenes, phenanthrenes. The developed techniques allowed to determine component compositions of petroleum and oil-contaminated soil quality and quickly, and can be used for the organization of environmental monitoring in the oil-producing regions, for the study of the behavior of petroleum hydrocarbons in the environment.

References: 1) Robinson, C.J., Low-Resolution Mass Spectrometric Determination of Aromatic and Saturated Fractions from Petroleum, Analytical Chemistry 43 (1971), 11.

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