[85-68-7], di-n-octyl phthalate[117-84-0], ditridecyl phthalate[119-06-2], and dibutyl phthalate [84-74-2] were investigated whether they induce DNA strand breakage in mouse lymphoma L5178Y cells with and without S-9 metabolic activation system. From these results, the induction of DNA strand breaks by seven phthalate analogues was not significantly increased at concentrations (0~100 ㎍/㎖) of phthalates used.

[PA4-18] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Monitoring of Kumho River Pollution Levels: Changing of Toxicity Patterns by Month

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Newly developed water pollution monitoring system has been applied for the purpose of environmental toxicology. The monitoring system has been used to evaluate acute toxicity of environmental toxicants from polluted sites and spots.
In the previous work, Mankyung river, Kumho river, Kumkang river and Miho creek were monitored and investigated their pollution levels by using the system. Kumho river was chosen for further environmental investigation because its pollution level and phenol and herbicide level by the water analysis showed similar pattern and pollution levels of the water samples from five spots in the river were measured by the system
The goals of this study is to figure out patterns of acute toxicity levels between June and October to achieve environmental monitoring purpose by using the system and to compare the acute toxicity patterns with chronic consequences of pollutants on fishes, Carasius carasius, in the river.
Five spots from up and down stream of Kumho river were selected. The water samples from the chosen spots were collected and kept on monitoring the biological effect through five months.
Fishes were collected from one spot each of up and down stream of the river in June, September and October. Reduction levels of phagocytic activities of fish macrophages were examined.
The toxicity pattern comparison of water samples form the five spots were similar in every month but the toxicity level of each spot was changed depending on season. The chronic effects on the fish macrophage were not affected by seasonal change.

[PA4-19] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

ERE-Luc Reporter gene assay is a sensitive method to detect EDC activities in Korea river.

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ERE-Luc Reporter gene assay is a sensitive method to detect EDC activities in korea river

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Environmental xenoestrogens can be released from various routes such as domestic and industrial effluents, leachates from waste disposal sites, incinerator and so on, and contaminate water environments. Various chemicals are usually found as mixtures in the environment and most of them are lipophilic so that they are persistent and accumulative in the environment and organisms. Therefore, it is possible through synergistic effects by a combination of various environmental chemicals, that they produce significant estrogenic effects. There are a number of in vitro assays to screen estrogenic substance. These assays include competitive binding assay, cell proliferative assay(E-screen), yeast-based screen assay, ER-mediated reporter gene assay. In the present work, we use MCF-7 cell line stably transfected with the pERE-Luc plasmid, which consist of three ERE(estrogen responsive element) regulating expression of an enhanced luciferase reporter gene