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[Lab. of Public Health]

The mutagenicity of Organotin Compounds as Environmental Pollutants.

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The mutagenicity of 14 organotin compounds which have been reported to be environmental pollutants was studied. The experiments were carried out by a modification of the conventional Salmonella assay. Each tested chemical was removed by washing the tested strain with phosphate buffer after preincubation. It became apparent that mono-n-butyltin oxide, n-butyltin trichloride, di-n-butyltin dichloride tri-n-butyltin chloride, bis-(tri-n-butyltin)-oxide and dimethyltin dichloride were mutagens in *S. typhimurium* TA100. Di-n-butyltin dichloride was found mutagenic in TA98 strain. The mutagenic intensities of these compounds, which have antibacterial activity, were clearly evaluated by their induced mutation frequency values and the amounts showing mutagenicity.

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[Lab. of Public Health]

**Isolation of substances from glossy privet (*Ligustrum lucidum* Ait.)
inhibiting the mutagenicity of benzo[a]pyrene in bacteria.**MIKI NIKAWA*, HIROYUKI HAYASHI, TAKAHIKO SATO,
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Methanol and hot-water extracts of glossy privet (*Ligustrum lucidum* Ait.) inhibited the mutagenic activity of benzo[a]pyrene in *Salmonella typhimurium* TA98 with S9 mix. The methanol extract was fractionated with ether and n-hexane. As the active components, oleanolic and ursolic acids were isolated, which were soluble in ether and insoluble in n-hexane.

The hot-water extract was fractionated to water, 60 % and 100 % methanol fractions. Nuezhenide was isolated from the 60 % methanol as the active component.

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[Lab. of Public Health]

**Fate of lime-based amendements applied for improving freshwater and
seawater aquatic environments.**NOBUYUKI FUTAEDANI, NORITO WATANABE, YOSHINAO KANO, RYOZO FUNASAKA,
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The fate and chemical forms of lime after application in an aquatic environment were studied for the duration of 12 weeks. In freshwater, critical compounds were CaCO_3 and $\text{Ca}(\text{OH})_2$; relative composition of CaCO_3 in precipitants was increasing between 2 and 8 weeks, and then reached approximately 60%. In seawater, CaCO_3 , $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ and $\text{Mg}(\text{OH})_2$ were recognized as critical constituents; composition of CaCO_3 showed maximum between 2 and 6 weeks, and $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ began to increase from 8 week. Final compositions of three compounds were 66.7% for $\text{Mg}(\text{OH})_2$, 19.7% for $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ and 13.6% for CaCO_3 .