

제 목	d-Limonene and Cineole Inhibition of Benzo(a)pyrene-Induced Mutagenicity and Lipid Peroxidation
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내 용	<p>The present study was designed to compare the effects of d-limonene and cineole on the benzo(a)pyrene (BP)-induced mutagenicity, BP metabolism and lipid peroxidation. Modified Ames assay was employed to evaluate the inhibitory effect of d-limonene and cineole on the BP-induced mutagenicity. The number of revertant-bearing wells was decreased by 44 ~ 77% in the presence of both BP and d-limonene compared with that of BP alone whereas cineole decreased the number of revertant-bearing wells by 28~45% at the concentrations between 2<math>\mu</math>M and 2mM. d-Limonene suppressed BP metabolism by 16, 26 and 55% at the same concentrations. The EC<sub>50</sub> values for d-limonene and cineole in inhibiting lipid peroxidation were 2.0 mM and 16mM respectively, as assayed by thiobarbituric acid method. The present study showed that d-limonene and cineole have common antimutagenic effects although d-limonene appeared to be more effective than cineole in suppressing mutation and lipid peroxidation. The results suggest that the antimutagenic effects of d-limonene and cineole may be associated with alternation in enzyme activities and with inhibition of lipid peroxidation.</p>