

**B527** Seasonal Variation in Concentration and Composition of Monoterpenoids from *Artemisia japonica*

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The composition and concentration of monoterpenoids in the leaves of *Artemisia japonica* were determined. And seasonal variation in monoterpenoids of *Artemisia japonica* was investigated. Samples were taken from five sites at Muhak mountain. Monoterpenoids in the leaves were analyzed using gas chromatography-mass spectrometry. The leaf monoterpenoids fraction of the plant were dominated by octene, R.T. 5.02, R.T. 9.151, sabinene,  $\beta$ -pinene, cyclohexene, R.T. 13.068, and R.T. 17.182. There were marked seasonal differences in concentration and composition of leaf monoterpenoid. The total amount of monoterpenoids was ranged from 0.0073 mg/g to 0.0622 mg/g. Most of the high percentage of monoterpenoids in leaf of spring time were those with early retention times. Leaf monoterpenoids in fall season were composed by compounds with late retention times.

**B528** Secondary Production in the Population of *Hydropsyche* sp. (Trichoptera) in the Suyong and Soktae Streams, Tributaries of the Suyong River

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By using Surber net *Hydropsyche* sp. was collected monthly from August 1993 to July 1994 in the Suyong and Soktae streams of the Suyong river, which flows through the municipal area of Pusan. Secondary production was assessed based on the modified Hynes' Size-Frequency method. The maximum production among sampled sites appeared to be  $1497.3 \pm 23.7$  g/m<sup>2</sup>/year, while minimum was  $0.9 \pm 0.0$  g/m<sup>2</sup>/year. Annual mean production was  $773.0 \pm 8.4$  g/m<sup>2</sup>/year in the Suyong stream, and  $138.4 \pm 3.6$  g/m<sup>2</sup>/year in the Soktae stream. The impact of environmental factors in the stream ecosystem appeared to be reflected in the secondary production of the observed population, and the importance of measurement of secondary production was demonstrated in this study.