

**SL406     Studies on the Microbial Activities and Heavy Metals  
of Forest Soil in Mt. Nam, Seoul**

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Studies were undertaken to investigate the seasonal variation of dehydrogenase activity, acid phosphatase activity and adenosine tri-phosphate(ATP) content as measures of total microbial activity and biomass over a period of 1 year in coniferous and deciduous forest soil in Mt. Nam. The relationships of several heavy metal concentrations and those microbial activities were seasonally analysed with soil horizons. Some physicochemical properties, such as soil pH, moisture content, organic matter and water holding capacity were determined. The pH and moisture content were ranged about 3.9-5.1 and 18.2-55.9%, respectively. Organic matter had the highest values in litter layer with decreasing in lower horizons. Heavy metal concentrations of soils in both forest site soils were apparently decreasing with soil horizons. Soils of deciduous forest site had mostly higher metal concentrations than in those of coniferous forest. These tendencies were similar with Kwangneung's results as a control sites. ATP contents, dehydrogenase activity and acid phosphatase activity were also higher in upper than in lower layers as well as spring and summer than in other seasons. It was assumed that metabolically depressed microorganisms during the winter were rapidly reactivated in spring. Those microbial activities were relatively lower in deciduous comparing with coniferous forest site in relation to heavy metal concentrations.