

Status of Soil Pollution in Ulaanbaatar, Mongolia

Batjargal Tserennyam, 백기태*, 양중석¹
금오공과대학교 환경공학과; ¹한국과학기술연구원 강릉분원
(kbaek@kumoh.ac.kr*)

The purpose of this survey is to investigate current status of the some heavy metals pollution of soil in Ulaanbaatar, capital city of Mongolia. In this study we took 22 soil samples, 11 topsoil and 11 subsoil (30 cm deep). We carried out sequential chemical extraction and aqua regia extraction, and investigated concentrations of As, Cd, Co, Cr, Cu, Ni, Pb and Zn in soil of city areas near broad road in Ulaanbaatar. Existence forms of metals in soil were divided into five fractions: exchangeable, bound to carbonates, bound to Fe-Mn oxides, bound to organic matter and residual.

Generally, heavy metal pollution is not serious in city areas and the metal concentration of topsoil is similar to subsoil. However, Pb concentration of topsoil is slightly higher than that of subsoil. It is related to dramatic increase in number of used vehicles and increase in the use of leaded fuel in last several years. Easily extractable fraction of metals is lower than hardly extractable fraction. Specially, exchangeable fraction for all metals is very low (less than 3.0%).