B554 Incompatible element contents of the floras from the metal ore deposits

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Incompatible elements were analysed to know absorption degree within the plants (*M. sinensis, A. vulgaris, G. oldhamiana and P. rigida*) from the serpentine area, South Korea (**SP**; serpentinite soil area, **NSP**; non-serpentinite soil area). Their host rocks were also analysed to compare the relationships with floras. In the floras, distinct differences are shown among the element groups (**I group** (K, Sr, Ba, Rb), **II group** (Th, U, Hf) and **III group** (Rare Earth Elements)), between upper and root parts, and among the species. Generally, root parts of the flora are high in the most of elements, and among the floras, *M. sinensis* and *A. vulgaris* show more distinctive differences than the *G. oldhamiana* and *P. rigida* between the upper and root parts. Especially, **I group** and LREE of the **III group elements** are more distinctive than the other elements. In the average element contents, **I group** elements show big differences between floras of the **NSP** and **SP.** In the rock compositions, serpentinites are mainly low relative to the non-serpentine rocks, and big differences between serpentinites and non-serpentine rocks are shown in the **I group** and LREE of the **III group** elements. Comparing with the elements between floras and their host rocks, similar positive and negative trends are shown, and host rocks from the **SP** are lower in the most of elements than those of the non-serpentine area in the floras. Distinctive differences between floras and their host rocks are shown in the **I group** and LREE of the **III group** elements. Upper results with previous studies suggest that incompatible element contents of the floras from the metal ore deposits reflect those of the their host rocks as well as regardless for the contents of the host rocks, the floras absorb eligible incompatible element contents to survive.

B555 Soil buffer capacities from the differrent host rocks by the treatment of artificial acid precipitation

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To investigate the weathering soil buffering capacities of the artificial acidic precipitation, the weathering soils and their leachate solutions were sampled from the host rocks(granite;GR, rhyolite;RH, gabbro;GA, basalt;BA, two serpentinite;SE1, SE2 and limestone;LI) and analyzed for pH and chemical properties. In the soil pH of the GR and RH ,the acidic rocks, were 5.02 and 5.95, respectively. And the GA and BA, basic rocks, were 6.52 and 7.57. The SE1 and SE2 were 8.90 and 8.89. While the LI was 7.84. These results means the typical soil pH properties by host rocks. After the artificial acidic precipitation input 500*ml*, the average changes of soil leachate solutions treated by pH levels(pH 5.0, 4.0 and 3.0), were pH 5.73, 5.00 and 4.40. in GR soil, and pH 6.19, 5.99 and 5.57 in RH. GA were pH 6.31, 6.04 and 5.86, BA were pH 7.05, 6.85 and 6.56 and SE1 were pH 8.31, 8.26 and 7.71. SE2 were pH 8.29, 8.24 and 7.96. LI were pH 7.55, 7.46 and 6.79. The soil leachate pHs from volcanic rocks were higher than those from the plutonic rocks and GR soils showed greater response than other soils. With increasing 100*ml* input-solution, the soil leachate pHs were mainly decreased. Cation concentrations, CEC, EC and total nitrogen concentrations of RH and BA soils, the volcanic rocks, were higher than those of GR and GA soil, the plutonic rocks. On the contrary, Al concentrations of the GR and GA soils were higher than those of RH and BA soils, partly because of high quartz content in GR and Al content in the biotite and plagioclase in GA.