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Feasibility Study on the Distinction of Habitat of Ginsengs by using a Neutron Activation Analysis

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Ginseng refers to species within Panax, which is a botanical name meaning “all-heal” in Greek. Ginseng has been used for centuries for medical purposes in Korea and other far eastern nations. Recently, the ginseng market in Korea has been thrown into confusion and disorder because of the influx of cheap foreign ginsengs especially from China including Manchuria by a legal or contraband trade and a forged place of production. Hence, the distinction of a production area and nationality of ginsengs has become an important issue. In present work, we investigated feasibility on distinction of a production area of ginsengs by using an instrumental neutron activation analysis. The samples were obtained by favor of Geumsan Ginseng & Medical Crop Experiment Station.
Five samples made from Panax ginseng C.A. Meyer from Korea(KORB) , Panax Panax ginseng quinquefolium L. from Canada(CANH), Panax ginseng quinquefolium L. from China(CHNH), Panax notoginseng Burkill from China(CHNJ) and Panax japonicum C.A. Meyer from Japan(JPNJ) were irradiated at the PTS #1 and #3 holes for their neutron activations. For an analysis of the short half-life elements, the ginseng samples were irradiated for just 10 seconds and another ginseng samples for an analysis of the long half-life elements were irradiated for 2 minutes and cooled during a month to perform a gamma-ray spectroscopy. The concentrations of the elements were calculated using an absolute method, for which aluminum and iron flux monitors were co-irradiated with samples for the short half-life elements and long half-life elements, respectively. For the Feasiblility of distinction of habitat, we utilized a principal components analysis(PCA) and factor analysis(FA), both of which show similar results in this case. The KORB, CHNH and CHNJ show a similar elemental content distribution and grouped as one group through PCA and FA, and the CANH and JPNJ are distinct from the Korean and Chinese ginsengs. The result in present work limited in a statistical meaning because the number of samples is very small. We will investigate many samples in order to secure good statistics in a further study.
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Ecology of *Glehnia littoralis* Population

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Glehina littoralis it belongs to the Umbelliferae was designated with the rare plant by the Korea Forest Service & Forest Research Institute in 1997 and recorded by protection plant by the Ministry of Environment in Korea. Therefore, this study was conducted to evaluate the vegetation structure of *Glehnia littoralis* community by the phytosociology method, floristic composition table on coast of South Korea.
The flora of the studied area in *Glehnia lottoralis* community of coastal dune was listed as 83 species. *Glehnia lotoralis* community of Yeonggwanggun Duwori is many most was recorded by 43 species, but Anmyondo studied area was recorded by 19 species it was most low species diversity. *Carex pumila*, *Carex Kobomugi*, *Imperata cylindrica* var. *koenigii*, *Ischaemum anthephehoroides* and *Vitex rotundifolia* range all over the studied areas. *Corispermum stauntonii* and *Salicornia eurpoara* was recorded on east coast of studied areas and *Wedelia prostrata, Chenopodium ambrosioides, Aster spathulifolius* and *Hypochaeris radicata* was distributed with high coverage and frequency. The vegetation of *Glehnia littoralis* community was classified into *Vitex rotundifolia* subcommunity, *Ischaemun anthephephoroides* subcommunity and *Imperata cylindrica* var. *koenigii* subcommunity.
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