

Comparative study of Antioxidant and Metal ion Reducing Properties of the Extracts and Fractions of Leaves and Stems of 2 Kinds of Siberian Ginseng (*Eleutherococcus senticosus*)

Daewoon Choi, Khejhae Lee*, Aeri Park, Geunpyo Choi¹⁾, Jongdai Kim, Jinha Lee[†]

Institute of Bioscience and Biotechnology,
Institute of Life Science, Kangwon National University
¹⁾Gangwon Provincial College

Objectives

The siberian ginsengs are distributed in Korean mountainous districts. we have find a new cultivar one with strong red thorn in young stems. However general type did not have a red thorn in young stems.

The antioxidant activity and metal ion reducing properties of the ethyl alcohol extracts of the leaves and stems of the trees(general and red thorn types) were investigated in various screening methods.

Materials and Methods

Materials : The 2 kinds of siberian ginseng trees were obtained in Samcheok Area. The red type tree has many thorns in young stems. The raw materials(red and general types) used as sample in this study were old type trees(red and general types) which were taken in autumn. Sample were prepared with extracting in 70 % ethyl alcohol (EtOH) and some of them were fractionated with organic solvents.

Methods : The antioxidant activity was screened by ABTS, ESR, DPPH, TEAC and AEAC and reducing power properties on metal ions of the samples was studied by FRAP and CUPRAC assay.

Results

1. The antioxidant activity of the 70 % EtOH extracts of the red thorn type was stronger than general type. The ethyl acetate(EtOAc) fraction from 70% extracts from the red type also was shown a similar result.
2. The metal ion reducing property on FRAP and CUPRAC assay of the red type sample was indicated a strong activity in the EtOAc fraction, also.

[†]주저자 연락처(Corresponding author): 이진하 E-mail: jinhalee@kangwon.ac.kr Tel:33-250-6454

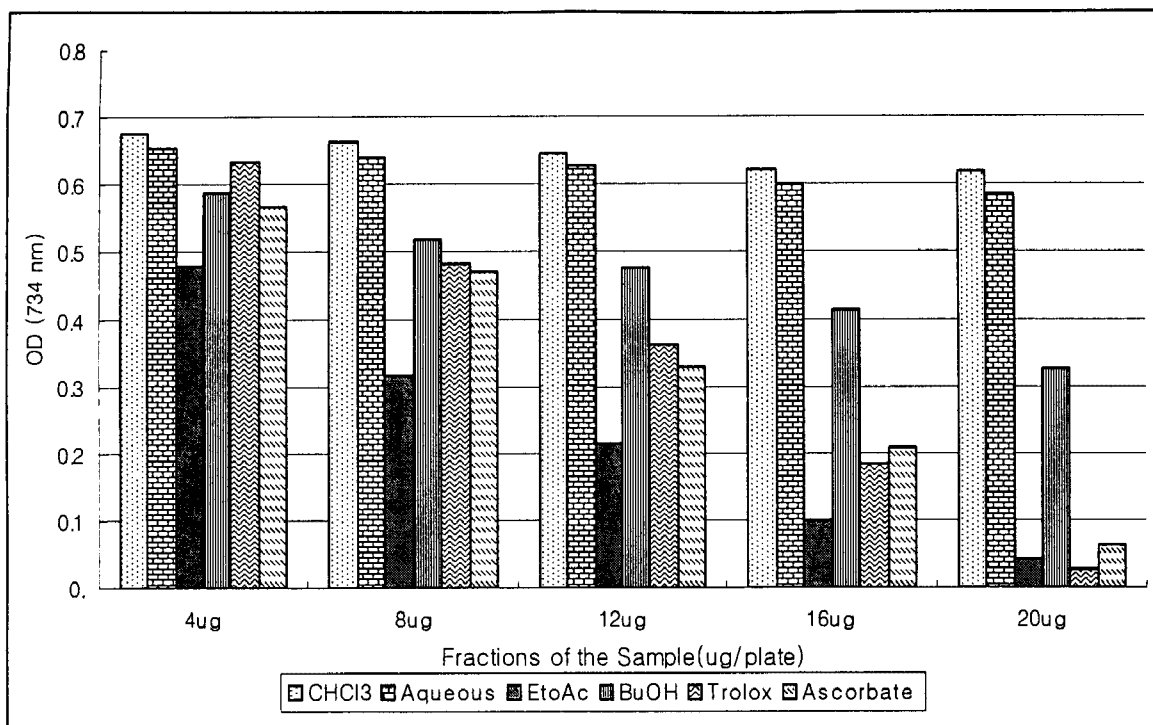


Fig. 1 Antioxidant Activity of the Fractions of the 70 % EtOH Extract from Red Type Siberian Ginseng on ABTS Assay