**Antioxidant effects of *Ambrosia artemisiifolia* extracts**

Chae Jung Woo1\*, Jo Hui Seon1, Lee Jin Young2, Lee Seung Jae3, Joo Sung Hyun4

1Gyeonggido Forest Environment Research Center, Osan 18118, Korea

2Department of Herbal Cosmetics Science, Hoseo University, Asan 31499, Korea

3Aroma Newtech Co., Asan 31532, Korea.

4Department of Forestry, Kyungpook University, Daegu 41566, Korea

*Ambrosia artemisiifolia* (=ragweed; AA) is an annual plant belonging to Asteraceae and is a naturalized plant of North America. It is being designated in the ecosystem disturbance plants because of high reproductive rate and secretion of allopathic agent, and this pollen causes an allergic disease. To make the utilization, one of the methods for removing this plant, the antioxidant capacity of AA was verified. The sample was collected on the Osan-river in august 2015, and separated root and above ground. This samples ware dried and extracted by 70% ethanol. An antioxidant effect of extracts was determined to electron donating ability, ABTS radical scavenging activity and SOD-like activity. In all the experiments, if extract concentration increased, it increased activities, and activities of root extract higher than above ground extract. In electron donating experiment, AA root and above ground extract each shown 73.24% and 40.14% at 1000 ㎍/ml. Result of ABTS experiment, AA root and above ground extract shown 99.49% and 36.34% at 1000 ㎍/ml. In SOD-like experiments, AA root and above ground extract each shown 26.91% and 18.77% at 1000 ㎍/ml.

**Key Word:** *Ambrosia artemisiifolia*, Anti-oxidant effect, Electron donating ability, SOD-like activity, ABTS radical scavenging activity