

Title Screening methods to measure antioxidant activities of phenolic compound extracts from some varieties of thai eggplants

Author Usawadee Chanasut, and Nithiya Rattanapanone

Citation Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.

Keywords phenolic; eggplants; antioxidant; DPPH; ABTS

Abstract

Antioxidant activities of the phenolic compound from the fruits of ten Thai eggplant varieties were studied. Freeze dried samples were extracted in 70% methanol, and their total phenolic content were measured. Antioxidant activities of the crude extracts were evaluated using three different assays: DPPH (diphenyl-1-picrylhydrazyl), β -carotenoid bleaching, and ABTS⁺ (2,2-azinobis 3-ethylbenzothiazoline-6-sulfonic acid). The antioxidant activities were expressed as gallic acid equivalent (GAE) and Trolox equivalent antioxidant capacity (TEAC) to standardize these methods to allow for data comparisons. The three antioxidant assay methods gave different antioxidant activity trends. Phenol contents of the eggplant extracts were related to their antioxidant activity measured by DPPH. In contrast, the results measured by β -carotenoid bleaching and ABTS⁺ were not related to the phenol contents of the extracts. On the basis of the DPPH results, *Solanum torvum* has the highest total phenolic content and total antioxidant activity.