Antioxidant Capacity of Alliun sativum L.Functional Food

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ABSTRACT

In this study, we evaluated the antioxidant activity of four commercial garlic functional foods (A, B, C and D) and fresh garlic extract. The antioxidant activity assay included scavenging DPPH activity, reducing capacity, ferrous ion chelating ability and clearance of the ability of the ABTS cation. The results showed that the four garlic functional foods had scavenge DPPH ability, C with 30.6% and B 5.17% ; relative reduction capability , A was 0.70 and C was 0.22. The ferrous ion chelating ability for A was 55.53% and D was 17.33%. The clearance ABTS cation for C was 14.22% and D was 9.64%. When prices of functional food were compared, the highest was NT 5.00 and the lowest was NT 2.22 , with a difference of 2.25 fold. To compare with the peak occurring 3 min garlic ingredient area ratio from HPLC analysis were A 68.29%, B 20.06%, C 22.79% and D 58.08%. The fresh garlic extract was 74.38% and dried garlic extract was 95.87%. Sample A had a component structure profile similar to the fresh garlic profile with the best cost-effectiveness (capacity / price).

Keywords : garlic、allicin、antioxidant activity、HPLC profile

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