

Title Evaluation of the antioxidant activity of extracts from buntan (*Citrus grandis* Osbeck) fruit tissues
Author Matook Saif Mokbel, and Fumio Hashinaga
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Abstract

The goal of the present work was to evaluate the antioxidant properties of buntan (*Citrus grandis* Osbeck) using various solvents, such as *n*-hexane, ethyl acetate (EtOAc), butanol and methanol. The antioxidant activities of crude extracts were evaluated by using the free radical scavenging β -carotene assay and total polyphenol. Ethyl acetate extracts of flavedo exhibited high antioxidative activities, followed by albedo and segment membrane extracts. Chromatography separation of EtOAc extract of flavedo using a silica gel column, yielded six fractions (A, B, C, D, E and F) using gradient elution with benzene and acetone (19:1, 14:1, 9:1, 5:1, 1:1 and 0:1). Among them, two fractions (C and D) showed strong antioxidant activities using the free radical scavenging activity (DPPH) antioxidant assay. These two fractions were further purified using silica gel column chromatography and preparative TLC. Their extracts could well be useful to prevent oxidation in fruit juices and essential oil food products as well as for health supplements. Identification of the responsible components is underway.