

## Antioxidant properties of crude extract, partition extract, and fermented medium of *Dendrobium sabin* flower

### ABSTRACT

Antioxidant properties of crude extract, partition extract, and fermented medium from *Dendrobium sabin* (DS) flower were investigated. The oven-dried DS flower was extracted using 100% methanol (w/v), 100% ethanol (w/v), and 100% water (w/v). The 100% methanolic crude extract showed the highest total phenolic content ( $40.33 \pm \text{mg GAE/g}$  extract) and the best antioxidant properties as shown by DPPH, ABTS, and FRAP assays. A correlation relationship between antioxidant activity and total phenolic content showed that phenolic compounds were the dominant antioxidant components in this flower extract. The microbial fermentation on DS flower medium showed a potential in increasing the phenolic content and DPPH scavenging activity. The TPC of final fermented medium showed approximately 18% increment, while the DPPH of fermented medium increased significantly to approximately 80% at the end of the fermentation. *Dendrobium sabin* (DS) flower showed very good potential properties of antioxidant in crude extract and partition extract as well as better antioxidant activity in the flower fermented medium.

**Keyword:** *Dendrobium sabin* flower; Flower fermented medium