

INTISARI

Indonesia memiliki keanekaragaman tanaman sangat melimpah. Pemanfaatan tanaman sebagai jamu atau obat herbal sekarang banyak dikembangkan karena memiliki efek samping jauh lebih rendah daripada obat konvensional biasa. Bunga rosela merah (*Hibiscus sabdariffa* L.) merupakan tanaman prospektif karena mudah dibudidayakan dan tidak memerlukan perawatan khusus dengan kandungan senyawa fenolik dan flavonoid yang memiliki aktivitas penghambatan enzim α -glukosidase dan penangkapan radikal bebas DPPH. Persebaran bunga rosela merah sudah merambah hingga di Provinsi Jawa Tengah tepatnya di Desa Majaksingi, Kecamatan Borobudur, Kabupaten Magelang.

Penelitian ini bersifat eksperimental dengan tujuan untuk mengidentifikasi golongan dan kadar senyawa dari ekstrak etanol bunga rosela merah. Metode kromatografi lapis tipis (KLT) digunakan pada identifikasi golongan senyawa. Dalam ekstrak etanol bunga rosela merah didapatkan kadar fenolik total dengan hasil sebesar $44,260 \pm 1,516$ mg GAE/g ekstrak dan flavonoid total sebesar $2,312 \pm 0,025$ mg QE/g ekstrak. Aktivitas penghambatan enzim α -glukosidase tidak dapat ditentukan karena nilai persentase inhibisi sangatlah rendah. Sedangkan aktivitas penangkapan radikal bebas DPPH lemah ditunjukkan dari nilai IC_{50} sebesar $150,202 \mu\text{g/mL}$. Oleh sebab itu, dapat disimpulkan bahwa ekstrak etanol bunga rosela merah hanya memiliki tingkat keefektifan yang rendah dalam penangkapan radikal bebas DPPH.

Kata Kunci: Bunga Rosela Merah (*Hibiscus sabdariffa* L.), Ekstrak Etanol, Enzim α -Glukosidase, dan DPPH.

ABSTRACT

Indonesia has a very abundant plant diversity. The use of plants as herb or herbal medicines is now widely developed because they have far lower side effects than ordinary conventional medicines. Red roselle flowers (*Hibiscus sabdariffa* L.) are a prospective plant because they are easy to cultivate and do not require special care because they contain phenolic and flavonoid compounds which have inhibitory activity on the α -glucosidase enzyme and scavenging DPPH free radicals. The spread of red roselle flowers has spread to Central Java Province, to be precise in Majaksingi Village, Borobudur District, Magelang Regency.

This research is experimental in nature with the aim of identifying the groups and levels of compounds from the ethanol extract of red roselle flowers. The thin layer chromatography (TLC) method is used to identify compound groups. In the ethanol extract of red roselle flowers, total phenolic content was obtained with results of $44,260 \pm 1,516$ mg GAE/g extract and total flavonoids of $2,312 \pm 0,025$ mg QE/g extract. The inhibitory activity of the α -glucosidase enzyme could not be determined because the inhibition percentage value was very low. Meanwhile, the DPPH free radical scavenging activity is weak as shown by the IC₅₀ value of 150,202 μ g/mL. Therefore, it can be concluded that the ethanol extract of red roselle flowers only has a low level of effectiveness in scavenging DPPH free radicals.

Keywords: Red Roselle Flower (*Hibiscus sabdariffa* L.), Ethanol Extract, α -Glucosidase Enzyme, dan DPPH.