ABSTRAK

Penuaan dapat disebabkan oleh stres oksidatif yang mengarah pada pembentukan kerutan, pigmentasi, dan asteatosis. Di sisi lain, enzim elastase juga dapat mempengaruhi elastistas kulit yang mengarah pada pengeduran. Daun moringa (*Moringa oleifera* Lamk) telah dilaporkan mengandung beberapa senyawa aktif seperti flavonoid yang memiliki potensi antioksidan dan anti-aging. Penelitian ini dilakukan untuk menentukan aktivitas ekstrak daun moringa (EDM) dalam pemerangkapan radikal DPPH dan penghambatan enzim elastase. EDM didapatkan menggunakan metode maserasi. Potensi EDM dalam pemerangkapan radikal DPPH dan penghambatan enzim elastase ditentukan menggunakan metode spektrofotometri. EDM memiliki nilai IC_{50} untuk aktivitas pemerangkapan DPPH juga penghambatan elastase sebesar 109.67 $\pm$ 0.83 µg/mL dan 159.67 $\pm$ 7.95 µg/mL. EDM memiliki aktivitas antioksidan dan anti-aging yang diindikasikan sebagai aktivitas pemerangkapan radikal DPPH dan penghambatan enzim elastase. Namun, EDM memiliki aktivitas pemerangkapan DPPH sedang dan aktivitas penghambatan elastase rendah.

Kata Kunci: Anti-aging; Antioksidan; Anti-elastase; Daun Moringa.

ABSTRACK

Skin aging causes by oxidative stress that leads to formation on wrinkles, pigmentation, and asteatosis. On the other hand, elastase enzyme also can influence the elasticity of the skin that leads to sagging. Moringa leaves (Moringa oleifera Lamk) has been reported contain some active compounds like flavonoid that has antioxidant and anti-aging potential. This study was presented to determine the potential of moringa leaves extract (MLE) in scavenging DPPH radical and inhibiting the elastase enzyme. MLE was obtained by using maceration methods. The potential of MLE in scavenging DPPH radical and inhibiting elastase enzyme was determine using spectrophotometric methods. MLE has IC_{50} value of DPPH scavenging activity also elastase inhibitory activity at 109.67 $\pm$ 0.83 µg/mL and 159.67 $\pm$ 7.95 µg/mL. MLE has antioxidant and anti-aging potential as indicated by DPPH scavenging activity and elastase inhibitory. However, MLE has moderate DPPH scavenging activity and low elastase inhibitory activity.

Keywords: *Antiaging; Antioxidant; Anti-elastase; Moringa leaves.*