Analisis komposisi Fitokimia Dendrophthoe pentandra L. (Miq.) dari empat spesies inang menggunakan Metode Mass Spectrometry (MS) = Phytochemical composition analysis of Dendrophthoe pentandra L. (Miq.) from four different species using Mass Spectrometry (MS) Method

Muhammad Fernanda Taufiq, author

Abstrak

Dendrophthoe pentadra L. (Miq.) merupakan tumbuhan parasit yang dapat tumbuh pada banyak inang. D. pentandra dikenal dari potensi bioaktivitasnya. Namun tingkat bioaktivitas tumbuhan tersebut bervariasi sesuai dengan komposisi fitokimianya. Komposisi fitokimia tumbuhan parasit dapat dipengaruhi oleh spesies inang. Namun, masih sedikit penelitian yang membandingkan komposisi fitokimia D. pentandra yang diisolasi dari tanaman inang yang berbeda. Penelitian ini bertujuan untuk mengetahui komposisi ekstrak D. pentandra dan membandingkan komposisi fitokimia D. pentandra menurut spesies inangnya. Empat sampel D. pentandra yang diperoleh dari empat inang berbeda Bauhinia purpurea, Albizia saman, Stelechocarpus burahol, dan Annona squamosa diekstraksi dalam pelarut methanol, dan fitokimianya dideteksi menggunakan mass spectrometry (MS). Hasil deteksi MS menunjukkan empat flavonoid: quercetine-3-O-rhamnoside, derivat quercetin, derivat kaempferol, dan myricetin-3-O-rhamnosida. Komposisi flavonoid berbeda pada setiap sampel, kecuali quercetin-3-O-rhamnoside yang terdapat pada semua sampel. Intensitas keempat flavonoid juga bervariasi pada semua sampel terutama quercetin-3-o-rhamnosida yang dijumpai pada semua sampel dan memiliki intensitas paling tinggi hingga rendah yaitu pada sampel D. pentandra dengan inang Stelechocarpus burahol, Annona squamosa, Alibizia saman, dan Bauhinia purpurea. Hasil ini menunjukkan bahwa spesies inang dapat mempengaruhi komposisi dan konsentrasi fitokimia pada D. pentandra.

.....Dendrophthoe pentadra L. (Miq.) is a parasitic plant that grows on many hosts. It has been known for its potential bioactivity. However, the level of its bioactivity is varied according to the composition of its phytochemicals. Phytochemical composition of a parasitic plant can be affected by the host species. However, there are less study comparing the phytochemical composition of D. pentandra isolated from different host plants. The aim of this study was to investigate the composition of D. pentandra extracts and compare the phytochemical composition of D. pentandra according to the host species. Four D. pentandra samples obtained from four different hosts (Bauhinia purpurea), Albizia saman, Stelechocarpus burahol, and Annona squamosal were extracted, and the phytochemicals were detected using mass spectrometry (MS). The result of MS detection indicated four flavonoids: quercetine-3-O-rhamnoside, a quercetine derivative, a kaempferol derivative, and myricetine. The composition of flavonoids was different on each sample, except for quercetin-3-O-rhamnoside which was found in all samples. The intensity of the four flavonoids also varied in all samples, especially quercetin-3-o-rhamnoside which was found in all samples and had the highest to low intensities, namely in the D. pentandra sample with Stelechocarpus burahol, Annona squamosa, Alibizia saman, and Bauhinia purpurea as hosts. This result indicated that host species might affect the composition and the concentration of phytochemicals in D. pentandra.