

Uji aktivitas antifouling metabolit sekunder tumbuhan isachne globose terhadap penempelan fitoepifiton di Situ Lab. Alam, FMIPA UI, Depok, Jawa Barat = Activity secondary metabolite of isachne globose as antifouling against phytoepiphyton in Situ Lab. Alam FMIPA UI, Depok, West Java

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Abstrak

Tumbuhan *Isachne globose* merupakan salah satu tumbuhan emergent yang hidup di Situ Lab. Alam, FMIPA UI. *Isachne globose* mampu berfungsi sebagai substrat bagi fitoepifiton, namun keberadaan fitoepifiton yang menempel pada tumbuhan *I. globose* mampu menghambat cahaya matahari yang mendukung pertumbuhan dan perkembangan tumbuhan tersebut. Telah dilakukan analisis pengaruh metabolit sekunder pada tumbuhan *I. globose* sebagai antifouling yang mampu menahan penempelan fitoepifiton. Penelitian dilakukan menggunakan batang *I. globose* perlakuan yang telah dihilangkan metabolit sekundernya dan batang kontrol yang keduanya direndam selama 7 hari di Situ Lab. Alam. Metabolit sekunder batang *I. globose* dianalisa dengan HPLC untuk mengetahui profil kromatografinya. Data penelitian menunjukkan terdapat kelimpahan fitoepifiton pada batang kontrol sebesar 219 individu/sel 2 dari 22 genera, sedangkan pada batang perlakuan sebesar 444 individu/cm<sup>2</sup> dari 27 genera. Berdasarkan uji t, nilai indeks keanekaragaman dan kelimpahan pada batang *I. globose* kontrol dan perlakuan berbeda nyata. Profil kromatogram ekstrak batang *I. globose* pada panjang gelombang 285 nm menunjukkan adanya 4 metabolit sekunder paling dominan (RT 7,50; 8,89; 9,99 dan 15,10). Diduga metabolit sekunder dominan tersebut berperan antifouling terhadap penempelan fitoepifiton di Situ Lab. Alam.

.....*I. globose* is one of the emergent plants that live in the Situ Lab. Alam, FMIPA UI. *Isachne globose* is able to function as a substrate for phytoepiphyton, but the presence of phytoepiphyton that attaches to plants *I. globose* is able to inhibit sunlight which supports the growth and development of these plants. An analysis of the effects of secondary metabolites on plants has been carried out *I. globose* as an antifouling that is able to withstand the attachment of phytoepiphyton. The study was conducted using stem *I. globose* treatment which had been removed by secondary metabolites and control, both of them were soaked for 7 days. Secondary metabolites in *I. globose* were analyzed by HPLC to determine the profile chromatographic. The results data shows the abundance of phytophthiton in *I. globose* control was 219 individuals/cm<sup>2</sup> from 22 genera, while in the treatment stem was 444 individual/cm<sup>2</sup> from 27 genera. Based on the t test, the value of index diversity and abundance in stem *I. globose* control and treatment were significantly different. Profile chromatogram extract *I. globose* at 285 nm wavelength showed 4 of the most dominant secondary metabolites (Real Time 7,50; 8,89; 9,99 and 15,10). It is suspected that the dominant secondary metabolites play role as antifouling for attaching phytoepiphyton at *Isachne globose* stem in Situ Lab. Alam.