RINGKASAN

Schizophyllum commune merupakan salah satu jamur yang termasuk ke dalam filum Basidiomycota. Jamur ini dapat mengakumulasi berbagai senyawa bioaktif seperti terpenoid, steroid, dan polisakarida yang memiliki aktivitas antimikroba. Pertumbuhan miselium dan metabolit sekunder dipengaruhi oleh medium pertumbuhan. Medium yang banyak digunakan untuk menumbuhkan miselium adalah medium cair. Hal tersebut karena, medium cair mempunyai potensi keuntungan dari produksi miselium yang tinggi dan waktu yang lebih singkat serta kemungkinan kontaminasi rendah. Tujuan penelitian ini adalah untuk mengetahui pengaruh medium pertumbuhan dan waktu inkubasi terhadap bobot miselium *S. commune* dan golongan metabolit sekunder yang dihasilkan serta mengetahui medium yang paling efektif untuk pertumbuhan miselium *S. commune*.

Penelitian ini dilakukan secara eksperimental menggunakan Rancangan Acak Lengkap pola Faktorial (RAL Faktorial), dua faktor yang digunakan yaitu medium pertumbuhan dan waktu inkubasi, serta tiga kali ulangan. Adapun medium yang akan digunakan yaitu *Modified Tien & Kirk medium* (TaK), *Mushroom Complete Medium* (MCM), dan *yeast malt extract* (YM). Waktu inkubasi yang digunakan 10, 15, 20, dan 25 hari. Variabel bebas dalam penelitian ini yaitu medium pertumbuhan dan waktu inkubasi yang digunakan, sedangkan variabel terikatnya adalah laju pertumbuhan dan terbentuknya metabolit sekunder. Parameter utama yang akan diamati yaitu bobot miselium dan senyawa metabolit sekunder golongan alkaloid, flavonoid, dan terpenoid, sedangkan parameter pendukungnya adalah pH awal dan pH akhir. Data yang diperoleh dianalisis menggunakan analisis ragam (ANOVA), apabila perlakuan berbeda nyata dilanjutkan dengan uji Duncan pada tingkat keprrcayaan 95%.

Hasil penelitian menunjukkan bahwa bobot kering miselium tertinggi pada medium MCM dalam waktu inkubasi 25 hari seberat 1,37 g, sedangkan bobot kering terendah pada medium YM dalam waktu inkubasi 25 hari seberat 0,3 g. *S. commune* mengandung senyawa metabolit sekunder golongan alkaloid, terpenoid dan flavonoid.

Kata Kunci **:** *Schizophyllum commune,* medium, metabolit sekunder, bobot miselium

SUMMARY

Schizophyllum commune is one of the fungi that include in phylum Basidimycota. This fungi can accumulate various bioactive compounds such as flavonoids, terpenoids, steroids, and polysaccharides that have antimicrobial activity. The growth of mycelium and production of secondary metabolite usually affected by the growth medium. The growth medium which widely used to cultivate mycelium is liqud medium. The reasons are because liqud medium have benefit potential from the high mycelium production, need shorter time and also low contamination risk. The aims of this research were to know the effect of the growth medium and incubation time toward weight of mycelium *S. commune* and what kind of secondary metabolite compound that produced and to know the growth medium that gave the best effect toward the growth of *S. commune*'s mycelium.

This research was done experimentally used Completely Random Design with Factorial pattern, two factors that used were growth medium and incubation time, and repeated for three times. The kind of medium that used were Modified Tien & Kirk medium (TaK), Mushroom Complete Medium (MCM), dan Yeast Malt Extract (YM). While the incubation time that used were 10, 15, 20, and 25 days. The independent variable of this research was kind of growth medium and the incubation time that used, and the dependent variable was the growth rate and the production of secondary metabolite. The main parameter that observed were the weight of mycelium and secondary metabolite compound that include as the member of alkaloids, flavonoids, and terpenoids. While the supporting parameter were initial pH and final pH. Data was carried out by analysis using ANOVA if the treatment showed real difference and continued by Duncan test with level confidence 95%.

The results of this research showed that the highest dry weight of mycelium was in MCM with the incubation time 25 days 1,37 gram, while the lowest dry weight of mycelium was in YM medium with the incubation time 25 days 0,3 gram. *S. commune* contains secondary metabolite compound that include in alkaloids, terpenoids, and flavonoids group.

Key words: Medium, *Schizophyllum commune*, Secondary Metabolite, Weight of Mycelium