

## **PENGARUH EKSTRAK YEAST TERHADAP KANDUNGAN PIPERIN PADA KALUS CABE JAWA (*Piper retrofractum* Vahl.)**

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### **INTISARI**

Cabe jawa (*Piper retrofractum*) merupakan salah satu jenis tanaman obat yang sering dimanfaatkan oleh masyarakat Indonesia. Tanaman ini memiliki banyak kandungan senyawa berkhasiat salah satunya piperin yang berfungsi sebagai antipiretik, antiinflamasi, antioksidan dan antiobesitas. Produksi piperin yang optimal dapat dilakukan melalui kultur kalus dengan penambahan elisitor ekstrak *yeast*. Namun, pengaruh ekstrak *yeast* terhadap kandungan piperin kalus Cabe jawa belum diteliti. Oleh karena itu, pada penelitian dilakukan pengujian pengaruh ekstrak *yeast* terhadap kandungan piperin Cabe jawa. Induksi kalus dilakukan pada medium Murashige & skoog (MS) kemudian dilanjutkan dengan pengamatan morfologi kalus. Tahap selanjutnya, kalus disubkultur pada medium perlakuan ekstrak *yeast* 0g/L, 0,5g/L, 1g/L, dan 1,5g/L dengan masing-masing perlakuan terdapat 3 ulangan. Selanjutnya dilakukan pengukuran kadar alkaloid piperin menggunakan uji KLT Densitometri. Kemudian berdasar hasil penelitian, penambahan ekstrak *yeast* pada konsentrasi yang digunakan tidak berpengaruh terhadap produksi piperin pada kultur kalus Cabe jawa.

Kata kunci: Piperin, kultur kalus, *Piper retrofractum* Vahl., ekstrak *yeast*.

**EFFECT OF YEAST EXTRACT ON PIPERIN CONTENT IN JAVANESE  
LONG PEPPER (*Piper retrofractum* Vahl.) CALLUS**

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**ABSTRACT**

Javanese Long Pepper (*Piper retrofractum*) is a medicinal plant that Indonesian people have used due to its bioactive compounds properties. This plant contains many compounds, one of it is piperine which functions as an antipyretic, anti-inflammatory, antioxidant and anti-obesity. Optimal piperine production can be increase through callus culture with the addition of elicitor *yeast* extract. However, the effect of *yeast* extract on the callus piperine content of Javanese Long Pepper has not been studied. Therefore, the research was conducted to examine the effect of *yeast* extract on the piperine content of Javanese Long Pepper callus culture. Callus induction was carried out on Murashige & skoog (MS) medium then followed by observation of callus morphology. The next step, callus was subcultured on *yeast* extract treatment medium 0g/L, 0.5g/L, 1g/L, and 1.5g/L with 3 replications for each treatment. Furthermore, piperine levels were measured using the TLC Densitometry test. Then based on the research, the addition of *yeast* extract to the concentration used did not have effect on piperine production in callus culture of Javanese Long Pepper.

**Keywords :** Piperin, growth, callus culture, *Piper retrofractum* Vahl., *yeast* extract.