INTISARI

KUSUMAWATI, M., 2017, PENGARUH KOMBINASI ZAT PENGATUR TUMBUH (ZPT) BAP DAN 2,4-D TERHADAP PEMBENTUKAN KALUS SERTA IDENTIFIKASI SENYAWA LINALOOL DAN α-PINENE PADA KALUS ZODIA (*Evodia suaveolens* Scheff), SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Daun zodia (*Evodia suaveolens* Scheff.) mengandung senyawa linalool dan α-pinene yang berfungsi sebagai penghalau nyamuk (*repellant*). Waktu pertumbuhan yang lama dan budidaya zodia yang sulit sehingga perlu dilakukan metode perbanyakan tanaman (kultur jaringan tanaman). Keberhasilan kultur jaringan terutama disebabkan oleh adanya kebutuhan unsur hara dalam medium. Tujuan penelitian ini adalah untuk mengetahui pengaruh kombinasi zat pengatur tumbuh (ZPT) Benzilaminopurin (BAP) dan 2,4-dichlorophenoxyacetic acid (2,4-D) terhadap pembentukan kalus serta identifikasi senyawa linalool dan α-pinene pada kalus zodia (*E. suaveolens* Scheff).

Eksplan daun zodia ditumbuhkan dalam media MS Setengah Kuat dengan kombinasi perbandingan zat pengatur tumbuh BAP : 2,4-D 0:2 *ppm*; 0,5:1,5 *ppm*; 1:1 *ppm*; 1,5:0,5 *ppm* dan 2:0 *ppm.* Kalus daun zodia dipanen dan diekstraksi dengan *n*-heksan. Filtrat *n*-heksan dianalisis dengan kromatografi gas.

Penambahan ZPT BAP dan 2,4-D pada media MS setengah kuat mempercepat pertumbuhan dan pembentukan kalus. Konsentrasi 1 : 1 *ppm* adalah konsentrasi terbaik dan tercepat dalam pertumbuhan dan pembentukan kalus. Kalus zodia tidak mengandung senyawa α-pinene dan linalool.

Kata kunci : eksplan daun zodia, media Murashige Skoog (MS) setengah kuat, BAP, 2,4-D, kromatografi gas.

ABSTRACT

KUSUMAWATI, M., 2017, COMBINED EFFECT OF PLANT GROWTH REGULATOR (PGR) BENZYLAMINOPURIN (BAP) AND 2,4-DICHLOROPHENOXYACETIC ACID (2,4-D) ON THE FORMATION OF CALLUSES AND IDENTIFICATION OF LINALOOL AND A-PINENE COMPOUNDS ON ZODIA CALLUSES (*E. suaveolens* Scheff.) SKRIPSI, FACULTY OF PHARMACY, UNIVERSITAS SETIA BUDI, SURAKARTA.

Zodia leaves (Evodia suaveolens Scheff.) contains linalool and α-pinene compounds that serve as mosquito repellent. A long time to growth and the difficult culture zodia so needed plant propagation methods (tissue culture plants). The success of tissue culture is mainly caused by the presence of nutrient needs in the medium. The purposes of this research are to determine the effect of a combination of plant growth regulator (PGR) Benzylaminopurin (BAP) and 2,4-dichlorophenoxyacetic acid (2,4-D) on the formation of calluses and identification of linalool and α-pinene compounds on calluses zodia (E. suaveolens Scheff.)

Zodia leaves explant have grown on MS medium half strong with combined ratio of growth regulators BAP : 2,4-D 0:2 ppm; 0,5:1,5 ppm ; 1:1 ppm; 1,5:0,5 ppm ; 2:0 ppm. Zodia leaves calluses were harvested and extracted using n-hexane. The filtrate of n-hexane were analyzed by gas chromatography.

The addition of PGR BAP and 2,4-D on MS medium half strong are to accelerate the growth and formation of calluses. Consentration 1 : 1 ppm is the best and fastest concentrationin the growth and formation of calluses. Zodia calluses are not containing α-pinene and linalool compounds.

Keywords : *zodia leaves explants, Murashige Skoog (MS) Medium half strong, BAP, 2,4-D, gas chromatography.*