DETECTION OF ANTHOCYANIDIN FROM CELL SUSPENSION CULTURE OF MELASTOMA MALABATHRICHUM

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Abstract: Cell suspension culture of Melastoma malabathricum was established from friable leaf callus cultured in liquid Murashige and Skoog (1962) medium supplemented with 0.25 mg/L BA (N\textsubscript{6}-benzilaminopurina) and 0.5 mg/L NAA (1-naphthalene-acetic acid). The anthocyanin in the cells was extracted and acid hydrolysed. \(R_f\) values in BAW (4:1:5), forestal and HCl-formic acid were determined on Whatman No. 3 paper and compared to the extract from petals of Hibiscus rosa-sinensis as the marker and the extracts from parts of the mother plant including the petals, fruits, leaves and petioles. Wavelength absorptions of the samples in MeOH-HCl and in the same solvent one hour after the addition of 5% aluminium chloride were determined. The anthocyanidin in the cell samples was found to be cyanidin, the one similar to that of the petals of Hibiscus, and the fruits, leaves and petioles of Melastoma mother plant. On the other hand, the anthocyanidin found in the petals was malvidin.

Keywords: anthocyanin, cell suspension culture, Melastoma malabathricum

Abstrak: Kultur ampaian sel Melastoma malabathricum di dalam medium cecair Murashige dan Skoog (1962) yang mengandungi 0.25 mg/L BA (N\textsubscript{6}-benzilaminopurina) dan 0.5 mg/L NAA (1-naftalen asid asetik) telah diperoleh daripada kalus daun yang rapuh. Antosianin di dalam sel telah diekstrak dan dihidrolisis secara bersaiz. Nilai \(R_f\) di dalam BAW (4:1:5), forestal dan HCl-asid formik telah ditentukan dengan menggunakan kertas Whatman No. 3 dan dibanding dengan ekstrak daripada petal Hibiscus rosa-sinensis sebagai rujukan serta ekstrak daripada bahagian-bahagian pokok induk seperti petal, buah, daun dan petiol. Penyerapan jarak gelombang sampel di dalam MeOH-HCl dan satu jam selepas penambahan 5% aluminium klorida telah ditentukan. Antosianidin di dalam sampel sel didapati adalah cyanidin, yang juga sama dengan antosianidin daripada petal Hibiscus, buah, daun dan petiol pokok induk. Antosianidin daripada petal pula adalah malvidin.

Kata kunci: antosianin, kultur ampaian sel, Melastoma malabathricum