Potechaman Pitpiangchan 2011: Phytochemistry and Gray Hair Staining Potential of *Eclipta alba* (L.) Hassk. Master of Science (Botany), Major Field: Botany, Department of Botany. Thesis Advisor: Associate Professor Syarunya Vajrodiya, Dr.rer.nat.
80 pages.

Phytochemical analyses of dichloromethane, ethyl acetate and butanolic extracts from methanolic whole plant extract of *Eclipta alba* (L.) Hassk. had been done by preliminary phytochemical screening. It was showed that coumarin, steroid and triterpenoids are constituents in dichloromethane extract, but there is only coumarin in ethyl acetate extract. None of these compounds was found in butanolic extract. Wedelolactone, the translucent-pale yellow needle shape crystal was isolated from the ethyl acetate extract by using dry column chromatography technique. The structure elucidation had been analysed by using spectroscopy technique (UV, FT-IR, MS, NMR) as well as melting point measurement.

The gray hair staining potential of *E. alba* whole plant extracts was investigated by dyed 2 types of gray hair i.e. natural gray hair and bleaching hair with methanolic, dichloromethane, water extract and methanolic extract combined with mordant ($Fe_2SO_4 \cdot 7\ H_2O$) in the concentration of 20 % of the extract in water. Gray hair were dyed for 2 hour. The colour of dyeing and control hairs were detected by colour meter. The results showed that which were dyed with all extracts showed yellow colour, but the methanolic extract combined with mordant showed darken colour. Bleaching hair showed higher potential to be stained than natural gray hair.

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