

Separation and purification of nicotine-like compound from *Daphnis genkwa* Flos

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Nicotine, a major component in cigarette, is regarded as addictive agent and it is frequently difficult to quit smoking. More than 80% of the attempts to quit smoking were failed within a year. Even though they quit smoking, they must keep attention to stop smoking continuously. As an approach to diminish nicotine addiction, a new nicotine-like compound from *Daphnis genkwa* Flos as a natural medicinal herb were screened and employing characterized. The optimum extraction method for nicotine alkaloids was as follows : *Daphnis genkwa* Flos sample was treated with acid (2N HCl, pH 2~3) and extracted three times with CHCl₃. Aqueous layer was treated with alkali (5N NaOH, pH 10~12) and then extracted with CHCl₃. The maximum production of nicotine-like compound was shown at 40°C for 12 hours with the initial pH 6 and solvent ratio 1:60. Final amount of nicotine-like compound was a 162µg/g.

The nicotine-like compound from *Daphnis genkwa* Flos was purified by organic solvent extraction, active carbon, silica gel, and ion exchange column chromatography. The separation and purification of the nicotine-like compound was obtained about 25.7% in recovery ratio. When CHCl₃ : Me-OH (8:2, v/v) was used as a developing solvent in TLC experiments. R_f value of compound 1 and nicotine standard were 0.63 respectively, while that of compound 2 was 0.81. Color reactions compound 1 and nicotine standard were positive with iodine and Dragendorff but compound 2 was positive with iodine Dragendorff and KMnO₄. Form the results of analysis of nicotine-

like compound by TLC and color reaction, compound 1 was identified same with nicotine standard. But compound 2 was identified as nicotine alkaloid contained carbohydrate moiety.