

Abstract

A study of sweet tasting substances from Maglum Tanoo Leaves

(Abrus precatorius Linn.)

By

Sorasak Lhieochaiphant

Siriwan Suttajit

Maglum Tanoo (Abrus precatorius Linn.; F. Papilionaceae) herbarium specimen no. J.F. Maxwell No. 87-1239 is one well-known of Thai medicinal plants that contain a very toxic substance abrin in seeds. But there are many plant parts used as remedy in various symptoms both in Thai and other countries traditional medicines such as for relieve cold, cough and hoarseness etc. The most interesting characteristic of leaves of Maglum Tanoo is sweetish and demulcent. On this study of sweet tasting substances from thier leaves; extracted the sweet tasting substances with boiling hot water was started and precipitated the sweet tasting substances from extracts by acidified with 1 N.HCl in cool temperature. Sweet precipitates were extracted with methanol and concentrated. The sweet precipitates were shown in concentrated methanol again in cool temperature. The separation of sweet precipitates was run by quick column chromatography which absorbed by silica gel 60 G and eluted with chloroform, chloroform/methanol(9/1) , ethylacetate/methanol/water (100/16.5/13.5) respectively. Sweet chemical substances **I** and **II** were separated in mixture substances from chloroform/methanol and ethylacetate/methanol/water respectively.

In view of thin layer chromatographic , physical and chemical studies with UV spectrophotometry led to the sweet chemical substances which contained in **I** (**I.1**) indicated that; soluble in chloroform, sweet taste with a bitter taste, very soluble in water with ammonium salt, possibility to be steroid or flavonoid compound, melting point was $234^{\circ} - 239^{\circ}\text{C}$. , UV absorption at 305 - 400 nm. For sweet chemical substance which contained in **II** , indicated that ; sweet taste without a bitter taste, very soluble in water with ammonium salt,

possibility to be steroid compound, melting point was 230° - 232°C . and UV maximum absorption at 280 nm or 330 nm.

A study of sweet tasting substances from Maglum Tanoo leaves at this time could not succeed to separate and purify the sweet tasting substances. Continuous separation and purification have to be done for further useful studies in pharmacology, safety and toxicology.