



นำสารสกัดจาก กานพลู, พลู, ข่า, ขมิ้น, ไพล และ ทองพันชั่ง ที่สกัดด้วย hexane เป็นตัวทำละลายมาแยกส่วนด้วยวิธี thin layer chromatography นำแถบที่ได้แต่ละแถบไปทดสอบกับเชื้อรา แล้วนำแถบที่มีผลในการยับยั้งการเจริญมาแยกด้วย column chromatography อีกครั้งหนึ่ง พบว่าส่วนที่มีผลยับยั้งในการเจริญของเชื้อรา คือส่วนที่มี  $R_f = 0.52, 0.51, 0.63, 0.67, 0.66$  และ  $0.46$  ตามลำดับ



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่  
Copyright© by Chiang Mai University  
All rights reserved

**Thesis Title**                    **Inhibitory Effect of Some Medicinal Plants on Dermatophytes.**

**Author**                            **Mr. Dumrong Pongputthachat**

**M.S.**                                **Biology**

**Examining Committee :**

Assist. Prof. Morakot	Sukchotiratana	<b>Chairman</b>
Assoc. Prof. Dr.Duang	Buddhasukh	<b>Member</b>
Lecturer. Dr.Uraporn	Sardsut	<b>Member</b>

### **Abstract**

Ten species of medicinal plants were used in this study i.e. clove (Eugenia caryophyllus (Spreng.) Bullock & Harrison), betel pepper (Piper betle Linn.), galangal (Languas galanga (Linn.) Stuntz.), curcuma (Curcuma longa Linn.), plai (Zingiber cassumunar Roxb.), tong pan chang (Rhinacanthus nasutus Kurz), creyat root (Andrographis paniculata Nees), white gwow (Pueraria mirifica Airy Shaw and Suvatabandhu), java tea (Orthosiphon aristatus (Bl.) Mig) and candle stick (Cassia alata Linn.) The dry medicinal plants were ground into powder and extracted by drenching in four different solvents i.e. distilled water, methanol, dichloromethane and hexane for 48 hours. The crude extracts were tested for inhibition of growth against four species of dermatophytes i.e. Epidermophyton



floccosum , Microsporum gypseum , Trichophyton mentagrophytes and Trichophyton rubrum using paper disc diffusion method and the diameter of the clear zone was measured. It was found that only the methanol, dichloromethane and hexane extracts of clove, betel pepper, galangal, curcuma, plai and tong pan chang were able to inhibit the growth of dermatophytes. Extracts from other plants had no effect on the growth of dermatophytes tested.

The hexane extracts of clove, betel pepper, galangal, curcuma, plai and tong pan chang were subjected to thin layer chromatography and each band was tested for inhibition against the dermatophytes. The inhibitory bands were again separated by column chromatography . It was found that the inhibitory fractions of the hexane extract of clove, betel pepper, galangal, curcuma, plai and tong pan chang were the fractions with  $R_f = 0.52, 0.51, 0.63, 0.67, 0.66$  and  $0.46$  respectively.