

## PHYTOCHEMICAL SURVEY OF HERB DRUGS (VII)

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國產生藥의 植物化學 調査研究 (VII)

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國產生藥 52 種에 對하여 植物化學的 調査를 하고 그中 알칼로이드의 存在를 박층 크로마토그래피로 檢出한 結果를 報告한다.

As one of projects of this Institute, 330 species of plants which are currently used as herb drugs in Korea were screened for the presence of alkaloids, phenolic compounds, flavonoids, chalcones, lactones, glycosides, carbohydrates, terpenoids, steroids, proteins, polypeptides, saponins, and organic acids. The most reliable presence of alkaloids detected by thin layer chromatography is presented by screening of 52 species.

### EXPERIMENTAL AND RESULT

Plant material pharmacognostically identified was extracted with  $H_2O$ ,  $EtOH$  and  $Et_2O$  at room temperature respectively.

The solvent was removed from the extracts under reduced pressure. Ten to 20g. of each extract were dissolved in 10%  $HCl$  solution and extracted with  $Et_2O$ . The  $H_2O$  layer was made alkaline and extracted with  $CHCl_3$ .

The  $CHCl_3$  layer was evaporated and the residue was dissolved in dilute  $HCl$  solution to be subjected to alkaloid test by Meyer's reagent.

The fraction which responded to the alkaloid reaction was chromatographed.

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TABLE 1. The Rf values detected. The ascending method was used with silica gel G. (Merck's) for thin layer chromatography at room temp. Solvent mixture: BHH, BuOH-H<sub>2</sub>O-AcOH(5:4:1); AB, 0.1% aqueous ammonia- BuOH(1:1); BH, BuOH-2%HCl(96:20). Detecting reagents: D, Drogendorff's reagent; P, 2% platinum chloride iodine solution; I, iodine; N, ninhydrin reagent; F, fluorescence.

Family & Plant name	Part Used	Extr-act	Rf			Alkaloid Previously reported
			AB	BH	BHH	
<i>Menispermaceae</i> <i>Menispermum dahuricum</i> DC.	Herba	H <sub>2</sub> O	2.475(FIDN)	1.485(NP) 9.365(FIP)	3.465(FIDN) 8.91(FI)	Dauricin
		MeOH	1.98(FIDP)	1.485(FP)	4.455(FID) 6.93(FIP)	
<i>Rutaceae</i> <i>Evodia Daniellii</i> Beunett.	Cortex	H <sub>2</sub> O	1.98(FIPN) 3.96(FIDN) 7.92(FI)	1.98, 9.365(F)	7.92(FIDN) 2.92(FIN) 3.96(FI)	
		MeOH	2.97, 4.275(FIDN) 7.92, 9.365(FID)	2.475(FIDP) 7.92(FIP)	2.475, 6.225(FI) 8.415(FIDP)	
		Et <sub>2</sub> O	9.365(FI)	8.415(FI)	8.91(FIP)	
<i>Euphorbiaceae</i> <i>Mallotus Japonicus</i> Mueller	Folium	MeOH	3.465(FIP) 8.415(FID)	9.365(FID)	2.97(FIP) 8.91(FID)	
<i>Borraginaceae</i> <i>Symphytum peregrinum</i> L.	Herba	MeOH	2.485(FIP) 3.465, 9.365(FI)	9.365(FI)	8.91(FIP) 2.475(IP)	
		Et <sub>2</sub> O		9.365(FI)	8.91(FI)	
<i>Verbenaceae</i> <i>Verbena officinalis</i> L.	Herba	MeOH	9.365(FI)	9.365(FIN)	4.455(IDN) 8.91(FN)	
<i>Pedaliaceae</i> <i>Sesamum indicum</i> L.	Herba	MeOH		8.91(FI)	8.451(FI)	
<i>Rubiaceae</i> <i>Galium verum</i> L. var <i>typicum</i> Maxi	Herba	H <sub>2</sub> O	1.98(FIN)		2.475(FIN)	
<i>Compositae</i> <i>Gnaphalium Luteo-album</i> L.	Herba	MeOH	8.91(FIN)	8.415(FID)	3.365(FP) 8.91(FIDP)	

### References

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2. Woo, L.K., Suh, C.S. and To, S.H. *J. Pharm. Soc. Korea*, 12, 91(1968).