

Phytochemical Survey of Herbdrugs (II)*

by

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禹麟根 · 申善鎬 : 漢藥의 植物化學的 調査(II)

漢藥 50 種의 植物化學的 調査에서 檢索된 alkaloid 의 存在를 表示하였다.

A project of this institute is phytochemical survey of the herb drugs in Korea for further study. The present paper of this series tabulated alkaloids detected from fifty species of plants.

EXPERIMENTAL

Materials were screened on the presence of alkaloids, phenolic compounds, flavonoids, chalcones, lactones, glucosides, carbohydrates, terpenoids, steroids, proteins, polypeptides, saponins, and organic acids for the further study. In this report, alkaloids detected by paper chromatography are tabulated. Plant material pharmacognostically identified was extracted respectively with water, alcohol and ether at room temperature.

The solvent was removed from the extracts using vacuum when necessary. 10 to 20 g. of each extract was dissolved 10% in hydrochloric acid solution and extracted with chloroform. The chloroform layer was evaporated and the residue was dissolved in 94% alcohol to be subjected to alkaloid test by Meyer's reagent.

Paper chromatography (ascending) was carried out on the fraction which responded to the alkaloid reaction.

MATERIALS AND METHODS

Paper: Whatman No. 1 (3×50 cm)

Developer:

Butanol: Water: HAC (5 : 4 ; 1)(BHH)

0.1% Ammonia Water-Butanol(AB)

Butanol: 2% HCl (96: 20).....(BH)

Color reagent

Fluorescence(F)

Chargeff's reagent.....(C)

2% Platin chloride iodine soln(PI)

Iodine(I)

Ninhydrin reagent.....(N)

Condition: 15° to 20° for 40 hrs.

*Paper I, Seoul Univ. J.(C), 13, 1 (1963)

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TABLE I.—The Rf. Values

Plant	Extract	AB	Rf BH	BHH	Alkaloid previously reported
Alismataceae					
Alisma Plantago L. var. parviform Torr	MeOH	0.885(I)		0.922(I)	
Araceae					
Acorus gramineus Solander	MeOH	0.800(F) 0.903(I)	0.892(F) 0.826(F) 0.794(F) 0.939(I) 0.923(I)	0.932(F) 0.936(I)	
Pinellia ternata Breitenbach	MeOH		0.744(I)	0.793(F) 0.801(I) 0.863(I)	
Gramineae					
Imperata cylindrica Beauvois var. Koenigii Durand et Schinz	MeOH	0.883(I)	0.864(I)	0.914(I)	
Labiatae					
Nepeta japonica Max.	MeOH		0.914(F)	0.922(I)	
Orchidaceae					
Gastrodia elata Blume	MeOH	0.865(I)	0.864(I)	0.911(F) 0.894(I)	
Polygonaceae					
Cynanchum Wilfordi Hemsley	MeOH	0.975(I)	0.959(I)	0.926(I)	
Ranunculaceae					
Clematis mandshurica Max.	MeOH		0.757(F)	0.869(F)	
Rutaceae					
Evodia rutaecarpa Hooker fil. et Thomson	MeOH	0.913(I) 0.852(I)	0.737(F) 0.531(F) 0.881(I) 0.541(I)	0.857(F) 0.781(F) 0.914(I) 0.776(I)	Evodiamine Rutaecarpin ¹⁾
	Et ₂ O	0.886(I)		0.868(F) 0.801(F) 0.918(I) 0.809(I)	
Umbelliferae					
Angelica davurica Bentham et Hooker	MeOH	0.915(F) 0.798(I) 0.819(I)	0.920(F) 0.892(I)	0.925(I) 0.907(F)	
Cnidium officinale Makino	MeOH	0.882(F) 0.915(I)	0.912(F) 0.951(I)	0.913(F) 0.932(I)	
Zingiberaceae					
Zingiber officinale Roscoe	MeOH	0.951(I)	0.934(I)	0.939(I)	

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