

Phytochemical Screening of Korean Medicinal Plants (IV)

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한국산 약용식물의 화학성분 검색 (IV)

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Phytochemical screening results of sixty nine medicinal plants of Korea were tabulated in this paper.

The results of the preliminary phytochemical screening test of 455 plant samples were reported in previous papers^{1~10)}.

In continuation of the program, we now present the results of phytochemical examinations of another 69 species, belonging 37 families.

The presence of iridoids, flavonoids, saponins, steroids, terpenoids and alkaloids were screened with the usual methods and the results are tabulated in Table I.

The selection of plants was made mainly from the plants which have been used for the medical purposes in Korea and the lists of medicinal plants reported by Lee¹¹⁾ and Lee.¹²⁾

Experimental

Preparation of crude extracts and phytochemical screening test methods were described in the previous papers^{7~9)}.

Table I. Results of phytochemical screening

Scientific name (Family name)	Part of used	Iridoid	Flavo- noid	Froth test	L-B test*	Alkaloid		Serial No.
						Mayer	Dra- gen- dorf	
<i>Acer negundo</i> (Aceraceae)	Lf	+R	+	+	-	-	-	B-60
<i>Acer ginnala</i> (Aceraceae)	Lf	++R	+	-	-	-	-	B-40
<i>Achillea millefolium</i> (Compositae)	Fl	±	+	+	+	-	-	B-51
<i>Actinidia arguta</i> (Actinidiaceae)	Lf	+R	+	-	±	-	-	B-17
<i>Agave americana</i> (Agavaceae)	Lf	+R	-	+	-	-	-	B-57
<i>Ailanthus altissima</i> (Simaroubaceae)	Bk	±	-	±	-	-	-	B-70 a
<i>Ailanthus altissima</i> (Simaroubaceae)	Lf	+R	-	+	-	-	-	B-70 b
<i>Angelica decursiva</i> (Umbelliferae)	Wp	-	-	+	-	-	-	B-6
<i>Artemisia viridissima</i> (Compositae)	Wp	-	-	-	-	-	-	B-8
<i>Buxus microphylla</i> var. <i>koreana</i> (Buxaceae)	Tw	-	-	+	+	+	+	B-13
<i>Caltha palustris</i> var. <i>membranacea</i> (Ranunculaceae)	Wp	-	±	+	-	-	-	B-2
<i>Capsella bursa-pastoris</i> (Cruciferae)	Wp	-	+	+	+	-	-	B-14
<i>Cassia mimosoides</i> var. <i>nomame</i> (Leguminosae)	Wp	+R	++	+	+	-	-	B-45

Table I. (Continued)

Scientific name (Family name)	Part of used	Iridoid	Flavo- noid	Froth test	L-B test*	Alkaloid		Serial No.
						Mayer	Dragen- dorf	
<i>Chenopodium album</i> var. <i>centrorubrum</i> (Chenopodiaceae)	Wp	—	—	+	—	—	—	B-39
<i>Cirsium lineare</i> (Compositae)	Wp	+R	+	±	+	—	—	B-54
<i>Clematis apiifolia</i> (Ranunculaceae)	Ap	—	+	—	—	—	—	B-29
<i>Clematis heracleifolia</i> (Ranunculaceae)	Ap	—	+	—	—	—	—	B-61
<i>Clinopodium chinense</i> var. <i>parviflorum</i> (Labiatae)	Wp	—	±	+	+	—	—	B-46
<i>Corydalis ochotensis</i> (Papaveraceae)	Ap	—	—	+	+	+	+	B-16
<i>Cryptotaenia japonica</i> (Umbelliferae)	Wp	—	+	+	—	—	—	B-32
<i>Daucus carota</i> var. <i>sativa</i> (Umbelliferae)	Fr	—	+	—	±	—	—	B-56
<i>Dianthus sinensis</i> (Caryophyllaceae)	Ap	—	+	—	+	—	—	B-23
<i>Dianthus superbus</i> var. <i>longicalycinus</i> (Caryophyllaceae)	Wp	—	+	—	—	—	—	B-34
<i>Dioscorea japonica</i> (Dioscoreaceae)	Ap	+R	—	+	—	—	—	B-25
<i>Eupatorium chinense</i> var. <i>simplicifolium</i> (Compositae)	Wp	—	+	—	—	—	—	B-41
<i>Eupatorium lindleyanum</i> (Compositae)	Wp	—	+	—	—	—	—	B-48
<i>Evodia danielii</i> (Rutaceae)	Bk	±R	±	+	+	+	+	B-71 a
<i>Evodia danielii</i> (Rutaceae)	Fl	+R	+	+	+	±	±	B-71 b
<i>Ficus carica</i> (Moraceae)	Fr	—	+	—	—	—	—	B-76
<i>Forsythia koreana</i> (Oleaceae)	Ap	+R	+	±	+	—	—	B-55
<i>Fraxinus rhynchophylla</i> (Oleaceae)	Lf	—	—	+	—	—	—	B-73
<i>Galium cruciata</i> (Rubiaceae)	Ap	+B	+	—	—	—	—	B-20
<i>Galium cruciata</i> (Rubiaceae)	Rt	±B	—	±	+	—	—	B-28
<i>Glechoma hederacea</i> var. <i>longituba</i> (Labiatae)	Ap	—	±	±	+	—	—	B-24
<i>Hedera helix</i> (Araliaceae)	Fl	—	—	+	+	—	—	B-5
<i>Hedera helix</i> (Araliaceae)	Rt	—	—	+	+	—	—	B-11
<i>Hemistepta lyrata</i> (Compositae)	Wp	+R	±	+	+	—	—	B-9
<i>Hydrangea serrata</i> (Saxifragaceae)	Ap	+R	+	—	—	—	—	B-49
<i>Hylomecon vernale</i> (Papaveraceae)	Wp	—	—	+	+	+	+	B-1
<i>Hypericum ascyron</i> (Hypericaceae)	Wp	±R	±	+	±	+	+	B-43
<i>Hypericum erectum</i> (Hypericaceae)	Wp	+R	—	+	—	—	—	B-42
<i>Kummerowia striata</i> (Leguminosae)	Wp	+R	±	+	—	—	—	B-44
<i>Lathyrus davidii</i> (Leguminosae)	Wp	—	—	—	—	—	—	B-58
<i>Lychnis cognata</i> (Caryophyllaceae)	Wp	—	+	+	—	—	—	B-33
<i>Lycopus ramosissimus</i> var. <i>japonicus</i> (Labiatae)	Wp	—	+	+	+	—	—	B-36
<i>Lysimachia clethroides</i> (Primulaceae)	Rt	±R	+	+	+	—	—	B-30
<i>Lysimachia vulgaris</i> var. <i>davurica</i> (Primulaceae)	Wp	+R	±	—	±	—	—	B-18
<i>Magnolia sieboldii</i> (Magnoliaceae)	Lf	+B	+	+	—	—	+	B-50
<i>Matricaria maritima</i> subsp. <i>limosa</i> (Compositae)	Wp	—	+	—	—	—	—	B-27
<i>Menispermum dauricum</i> (Menispermaceae)	Wp	—	+	—	—	±	±	B-3
<i>Mosla japonica</i> (Labiatae)	Wp	+R	+	—	—	—	—	B-4
<i>Parthenocissus tricuspidata</i> (Vitaceae)	Lf	±	+	±	—	—	—	B-21
<i>Paulownia tomentosa</i> (Scrophulariaceae)	Lf	+R	—	+	+	—	—	B-69 a
<i>Paulownia tomentosa</i> (Scrophulariaceae)	Bk	±R	—	+	+	—	—	B-69 b

Table I. (Continued)

Scientific name (Family name)	Part of used	Iridoid	Flavo- noid	Froth test	L-B test*	Alkaloid		Serial No.
						Mayer	Dragen- dorf	
<i>Phryma leptostachya</i> (Phrymaceae)	Ap	—	±	±	+	—	—	B-35
<i>Phyteuma japonicum</i> (Campanulaceae)	Wp	+R	—	—	—	—	—	B-65
<i>Pisum sativum</i> (Leguminosae)	Sc	—	±	±	+	—	—	B-26
<i>Pisum sativum</i> (Leguminosae)	Vn	—	—	±	+	—	—	B-10
<i>Polygonum ellipticum</i> (Polygonaceae)	Rt	†R	—	—	—	—	—	B-72
<i>Populus tomentiglandulosa</i> (Salicaceae)	Tw	+R	+	—	—	—	—	B-67
<i>Pteridium aquilinum</i> var. <i>latiusculum</i> (Pteridaceae)	Ap	+R	†	+	—	—	—	B-77
<i>Pueraria thunbergiana</i> (Leguminosae)	Fl	—	+	+	+	—	—	B-47
<i>Rodgersia podophylla</i> (Saxifragaceae)	Rz	†R	+	+	+	—	—	B-38
<i>Rodgersia podophylla</i> (Saxifragaceae)	Lf	—	—	—	—	—	—	B-37
<i>Saxifraga stolonifera</i> (Saxifragaceae)	Wp	±	+	—	—	—	—	B-59
<i>Sedum kamtschaticum</i> (Crassulaceae)	Wp	—	+	—	—	—	—	B-19
<i>Senecio vulgaris</i> (Compositae)	Wp	—	+	±	±	—	—	B-31
<i>Styrax japonica</i> (Styracaceae)	Sd	†R	—	+	+	—	—	B-68
<i>Styrax obassia</i> (Styracaceae)	Fr	+R	+	+	+	±	±	B-52
<i>Symplocarpus renifolius</i> (Araceae)	Ap	—	±	±	—	—	—	B-12
<i>Syneilesis palmata</i> (Compositae)	Wp	—	+	—	—	—	—	B-53
<i>Thalictrum aquilegifolium</i> (Ranunculaceae)	Ap	—	+	+	+	+	+	B-15
<i>Urtica thunbergiana</i> (Urticaceae)	Wp	+B	—	+	+	—	—	B-7
<i>Veronica sibirica</i> (Sorophulariaceae)	Ap	†B	—	+	—	—	—	B-22
<i>Zea mays</i> (Gramineae)	Ch	—	—	+	+	—	—	B-74
<i>Zea mays</i> (Gramineae)	St	—	—	+	+	—	—	B-75

* L-B test: Lieberman-Buchard test, B: Blue, R: Red, Ap: Aerial parts, Bk: Stem bark, Ch: Corn husk, Fl: Flower, Fr: Fruit, Lf: Leaf, Rt: Root, Rz: Rhizome, Sc: Seed capsule, St: Stem, Sd: Seed, Tw: Twig, Vn: Vine, Wp: Whole plant.

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