

Table S2 (complete version of Table 12). Recent applications of HSCCC/HPCPC to natural product isolation from medicinal plants and algae

Compounds	Matrix <sup>a</sup>	Solvent systems (volume ratio) <sup>b</sup>	Mode <sup>c</sup>	MP <sup>d</sup>	Ref. <sup>e</sup>
<b>Flavonoids</b>					
Flavonoids	<i>Ampelopsis grossedentata</i> , leaf	Hex–EtOAc–MeOH–water (1:6:1.5:7.5)		LP	249
Flavonoids	<i>Byrsonima crassa</i> , leaf	EtOAc–PrOH–water (14:0.8:8)		UP	250
Anthocyanins (sambubiosides)	<i>Vaccinium myrtillus</i> , fruit	MtBE–BuOH–CH <sub>3</sub> CN–water–TFA (1:4:1:5:0.01)		LP	251
Flavonoids	<i>Patrinia villosa</i>	Hex–EtOAc–MeOH–water (10:11:11:8)		LP	252
Catechin, stilbene derivative	<i>Rheum tanguticum</i> , root and rhizome	EtOAc–EtOH–water (25:1:25) → (5:1:5)	stepwise	LP	253
Catechin constituents	<i>Camellia sinensis</i> cultivars, leaf	Hex–EtOAc–MeOH–water (1:6:1:6), (1:7:1:7), (1:5:1:5), (1:6.5:1:6.5)		LP	254
Flavonoids	<i>Paeonia suffruticosa</i> , flower	EtOAc–EtOH–AcOH–water (4:1:0.25:5)		LP	255
Baicalein, wogonin, oroxylin A	<i>Scutellaria baicalensis</i> , root	Hex–EtOAc–BuOH–water (1:1:8:10)	stepwise	LP	256
Baicalin, wogonoside	<i>Scutellaria baicalensis</i> , root	EtOAc–MeOH–1% AcOH (5:0.5:5)		LP	257
Flavonoid glycosides	<i>Trollius ledebouri</i> , herb	EtOAc–BuOH–water (2:1:3)		LP	183
Flavonoid glycosides	<i>Epimedium koreanum</i> , herb	CHCl <sub>3</sub> –MeOH–water (4:3.5:2)		LP	258
C-glycosylflavones	<i>Patrinia villosa</i>	EtOAc–BuOH–water (2:1:3)		LP	259
Flavanone glucoside	<i>Carthamus tinctorum</i> , flower	EtOAc–MeOH–water (5:1:5) [silica step clean-up before HSCCC]		LP	260
Flavonoids	<i>Salix alba</i> , bark	Hex–EtOAc–MeOH–water (2:2:2:3)		LP	261
Flavonoids	<i>Oroxylum indicum</i> , seed	Hex–EtOAc–MeOH–water (1:1.2:1:1), (1:2:1:1), (1:8:1:8)		LP	262
Astilbin, isoastilbin	<i>Smilax glabra</i> , rhizome	Hex–BuOH–water (1:1:2)		LP	263
Flavonoid glycosides	<i>Siparuna guianensis</i> , leaf	Hex–EtOAc–MeOH–water (0.6:4:0.05:1) → (0.6:4:0.7:1) Hex–EtOAc–BuOH–MeOH–water (0.6:4:1:0.05:1) for final purification	step-grad	LP	264
Astilbin, catechin, naringenin	<i>Benincasa hispida</i> , fruit	Hex–BuOH–MeOH–water (10:16:5:20) Hex–EtOAc–MeOH–water (1:1:1:1)		LP	265
Polymethoxylated flavones	<i>Citrus reticulata</i> , fruit peel	Hex–EtOAc–MeOH–water (1:0.8:1:1)		LP	266

Liquiritigenin, isoliquiritigenin	<i>Glycyrrhiza uralensis</i> , root	Hex–EtOAc–MeOH–CH <sub>3</sub> CN–water (2:2:1:0.6:2)		LP	267
Quercetin-3- <i>O</i> -rhamnoside	<i>Acer truncatum</i> , leaf	EtOAc–EtOH–water (5:1:5)		LP	268
Flavonoid glycosides, phloroglucinol derivatives	<i>Hypericum japonicum</i> , herb	EtOAc–EtOH–water (5:1:5) Hex–EtOAc–EtOH–water (1:1.2:1.2:1)	stepwise 2 step	LP	269
Hyperoside	<i>Hypericum perforatum</i> , herb	EtOAc–EtOH–water (5:1:5)		LP	270
Flavonoids	<i>Sophora flavescens</i>	Hex–EtOAc–MeOH–water (1:1:1:1)		LP	271
Flavonoids	<i>Patrinia villosa</i> , herb	Hex–EtOAc–MeOH–water (5:6:6:6)	stepwise	LP	28
Flavonoids	<i>Patrinia villosa</i> , leaf	Hex–EtOAc–MeOH–water (10:13:13:10)		LP	272
Scutellarin	<i>Erigeron breviscapus</i> , herb	Hex–EtOAc–MeOH–AcOH–water (1:6:1.5:1:4) EtOAc–BuOH–CH <sub>3</sub> CN–0.1% HCl (5:2:5:10)	2 step	LP	273
Flavonoids	<i>Davilla elliptica</i> , herb	EtOAc–PrOH–water (14:0.8:8)		UP	274
Xanthohumol	<i>Humulus lupulus</i> , hop cones	Hept–toluene–acetone–water (24.8:2.8:50:22.4)	dual mode	UP LP	275
Flavonoids, protocatechuic acid	<i>Hippophae rhamnoides</i> , fruit	Hex–BuOH–water (1:1:2)		LP	276
Casticin	<i>Artemisia annua</i> , leaf	Hex–EtOAc–MeOH–water (7:10:7:10)		LP	277
Hyperosid, luteolin glucoside	<i>Agrimonia pilosa</i>	EtOAc–MeOH–water (50:1:50) → (5:1:5)	stepwise	LP	278
Flavones, isoflavones	<i>Sophora japonica</i> , fruit pericarp	BuOH–acetic acid 1% (5:5), EtOAc–BuOH–acetic acid 1% (5:0.8:5)	2 step	LP	279
Flavonoid glycosides	<i>Citrus reticulata</i> , fruit peel	Hex–BuOH–MeOH–0.5% AcOH (1:3:1:4)		LP	280
Biflavonoids	<i>Garcinia kola</i> , seed	Hex–EtOAc–MeOH–water (3:5:3.5)	stepwise	LP	281
Flavonol glycosides	<i>Ginkgo biloba</i> , leaf	Hex–EtOAc–BuOH–MeOH–0.5% AcOH (1:3.5:0.5:1:4)		UP	282
Prenylflavonoids	<i>Artocarpus altilis</i>	Hex–EtOAc–MeOH–water (5:5:7:3), (5:5:6.5:3.5)	MDCCC	LP	283
<b>Coumarins</b>					
Inflacoumarin A, licochalcone A	<i>Glycyrrhiza inflata</i> , root	Hex–CHCl <sub>3</sub> –MeOH–water (5:6:3:2), (1.5:6:3:2)	2 step	LP	284
Osthol, xanthotoxol	<i>Cnidium monnieri</i> , fruit	Hex–EtOAc–MeOH–water (1:1:1:1) → (5:5:6:4)	stepwise	LP	285
Psoralen, isopsoralen	<i>Psoralea corylifolia</i> , seed	Hex–EtOAc–MeOH–water (5:5:4.5:5.5)		LP	286
Psoralen, isopsoralen	<i>Psoralea corylifolia</i> , fruit	Hex–EtOAc–MeOH–water (1:0.7:1:0.8)		LP	23
Coumarins	<i>Peucedanum praeruptorum</i> , root	LtPet–EtOAc–MeOH–water (5:5:5:5) →	grad	LP	287

		(5:5:6.5:3.5)			
Coumarins	<i>Cnidium monnieri</i>	LtPet–EtOAc–MeOH–water (5:5:5:5) → (5:5:6:4) → (5:5:6.5:3.5)	stepwise	LP	288
Coumarins	<i>Angelica dahurica</i> , root	Hex–MeOH–water (5:5:5) → (5:7:3)	grad	LP	289
Bergapten, imperatorin	<i>Cnidium monnieri</i> , fruit	Hex–EtOAc–EtOH–water (5:5:5:5)	stepwise	LP	290
Coumarins	<i>Cnidium monnieri</i> , fruit	Hex–EtOAc–EtOH–water (5:5:4:6) → (5:5:6:4)	stepwise	LP	291
Coumarins	<i>Fraxinus</i> sp., bark	BuOH–MeOH–0.5% AcOH (5:1.5:5)		LP	292
Coumarins	<i>Peucedanum decursivum</i> , root	LtPet–EtOAc–MeOH–water (5:5:7:4)		LP	293
Coumarins	<i>Edgeworthia chrysantha</i> , stem and bark	Hex–EtOAc–MeOH–water (4:6:4:6)		LP	294
Coumarins	<i>Angelica dahurica</i> , herb	Hex–EtOAc–MeOH–water (1:1:1:1), (5:5:4.5:5.5)	MDCCC	LP	295
Scoparone	<i>Artemisia capillaries</i> , <i>A scoparia</i> , herb	Hex–EtOAc–MeOH–water (1:1:0.45:1.55)		LP	296
Furanocoumarins	<i>Saposhnikovia divaricata</i> , root	CHCl <sub>3</sub> –MeOH–water (10:8:4)		LP	297
Coumarins	<i>Angelica dahurica</i> , root	Hex–EtOAc–MeOH–water (5:5:4:6)	stepwise	LP	298
Coumarins	<i>Stellera chamaejasme</i> , root	Hex–EtOAc–MeOH–water (10:13:13:10)	stepwise	LP	27
<b>Phenolic compounds</b>					
Honokiol, magnolol	<i>Magnolia officinalis</i> , bark	Hex–EtOAc–MeOH–water (1:0.4:1:0.4)		LP	299
Gastrodin	<i>Gastrodia elata</i> , root	EtOAc–BuOH–water (3:2:5)		LP	300
Chlorogenic acid	<i>Lonicera</i> sp., flower	BuOH–AcOH–water (4:1:5)	2 step	UP	301
Syringin, edgeworoside C	<i>Edgeworthia chrysantha</i> , stem and bark	EtOAc–EtOH–water (15:1:15)		LP	302
Cannabinoids	<i>Cannabis sativa</i> , leaf	Hex–MeOH–water (5:3:2) acidified with 25 mM formic acid; linear grad MeOH–water from (3:2) to (4.5:0.5)	grad	LP	303
Kava lactones	<i>Piper methysticum</i> , root	Hex–EtOAc–MeOH–water (6:5:6:5)		LP	304
Phenylethanoids	<i>Plantago psyllium</i> , seed	EtOAc–water (1:1)	2 step	LP	305
Methyl gallate	<i>Acer truncatum</i> , leaf	EtOAc–EtOH–water (5:1:5)		LP	306
Penylbutenoids	<i>Zingiber cassumunar</i> , rhizome	LtPet–Et <sub>2</sub> O–EtOH–water (5:2:4:1)		LP	307
Phenylethanoid- and iridoid glycosides	<i>Stachytarpheta cayennensis</i> , root	EtOAc–BuOH–water (1:X:1); X = 0.05 → 0.2 → 0.5 → 1.0	step-grad	LP	308
Prenylated phenolics	<i>Humulus lupulus</i> , hop cones	Hex–EtOAc–MeOH–water (8:2:8:2), (6:4:6:4), (5:5:5:5)	Sample cutting	LP	135

Sucrose esters	<i>Polygala tenuifolia</i> , bark	CHCl <sub>3</sub> –MeOH–water (3:3.5:2) EtOAc–BuOH–EtOH–water (4:0.6:0.6:5)		LP	309
Salvianolic acids	<i>Salvia miltiorrhiza</i> , root	Hex–EtOAc–MeOH–water (1.5:5:1.5:5)		LP	310
Salvianolic acid B	<i>Salvia miltiorrhiza</i>	36% PrOH–8% phosphate system with the ratio between NaH <sub>2</sub> PO <sub>4</sub> : K <sub>2</sub> HPO <sub>4</sub> = 6:94		UP	311
Curculigoside, curculigoside B	<i>Curculigo orchioides</i>	EtOAc–EtOH–water (5:1:5) + additional cleaning step by D101 resin column chromatography		LP	312
Ferulic acid	<i>Angelica sinensis</i> , root	Hex–EtOAc–MeOH–water (3:7:5:5)		LP	70
Honokiol, magnolol	<i>Magnolia officinalis</i> , bark	LtPet–EtOAc–CCl <sub>4</sub> –MeOH–water (1:1:8:6:1)		LP	201
Hydrolysable tannins	<i>Terminalia chebula</i> , fruit	Hex–EtOAc–MeOH–water (1:20:1:20)		LP	313
Galloyl glucose derivative	<i>Acer truncatum</i> , leaf	Hex–EtOAc–MeOH–water (0.25:5:1:5)		LP	314
Honokiol, magnolol	<i>Magnolia officinalis</i> , bark	Hex–EtOAc–MeOH–water (1:0.4:1:0.4)		UP	315
Gallic acid	<i>Punica granatum</i> , husk	EtOAc–MeOH–water (50:1:50). Final purification by preparative liquid chromatography		LP	316
Salvianolic acid B, 3,4-dihydroxyphenyllactic acid	<i>Salvia miltiorrhiza</i> , root	Hex–EtOAc–MeOH–acetic acid–water (1:6:1.5:1.5:8)		LP	317
Isomeric polyphenols	<i>Parthenocissus laetevirens</i> , root	Hex–EtOAc–MeOH–water (1:2:1:2)	MDCCC	LP	318
Dicaffeoylquinic acids	<i>Ainsliaea fragrans</i> , stems and leaf	CHCl <sub>3</sub> –MeOH–water (8:8:4)		LP	319
Punicalagin	<i>Punica granatum</i> , husk	BuOH–TFA–water (100:1:100)		UP	320
<b>Alkaloids</b>					
Protoberberine alkaloids	<i>Enantia chlorantha</i> , bark	CH <sub>2</sub> Cl <sub>2</sub> –MeOH–water (48:16:36) containing KClO <sub>4</sub> (1 <sup>st</sup> run) or NaOH (2 <sup>nd</sup> run)	2 step, dual mode	LP UP	234
Ungeremine	<i>Nerine bowdenii</i> , bulb	EtOAc–MeOH–water (45:20:35)		UP	205
Evodiamine, rutaecarpine, evocarpine	<i>Evodia rutaecarpa</i> , fruits	Hex–EtOAc–MeOH–water (5:5:7:5)		LP	321
Corydalis alkaloids	<i>Corydalis yanhusuo</i> , tuber	CCl <sub>4</sub> –CHCl <sub>3</sub> –MeOH–0.2 M HCl (1:7:3:4) and CHCl <sub>3</sub> –MeOH–0.2 M HCl (7:3:4)		LP	322
Ricinine	<i>Ricinus communis</i> , leaf	CH <sub>2</sub> Cl <sub>2</sub> –MeOH–water (93:35:72)		LP	323
Diterpene alkaloids	<i>Aconitum coreanum</i> , root	Hex–EtOAc–MeOH–0.2 M HCl (1:3.5:2:4.5)		LP	324
Quinolizidine alkaloids	<i>Sophora flavescens</i> , root	CHCl <sub>3</sub> –MeOH–2.3 × 10 <sup>-2</sup> M NaH <sub>2</sub> PO <sub>4</sub>		LP	29

		(27.5:20:12.5)			
Verticine, verticinone	<i>Fritillaria thunbergii</i> , bulb	CHCl <sub>3</sub> -EtOH-0.2 mol L <sup>-1</sup> HCl (3:2:2)		LP	325
Benzylisoquinoline alkaloids	<i>Coptis chinensis</i>	Hex-EtOAc-MeOH-1% AcOH (1:1:1:1)		LP	326
Sesquiterpene alkaloids	<i>Tripterygium wilfordii</i> , root	PE-EtOAc-EtOH-water (6:4:5:8)		LP	327
<b>Antraquinones</b>					
Hydroxyanthraquinones, cinnamic acid	<i>Rheum officinale</i> , root	SP: Ether-1% NaH <sub>2</sub> PO <sub>4</sub> (40:60); MP: 1% NaH <sub>2</sub> PO <sub>4</sub> :1% NaOH = 100:0-0:100 in 500 min	pH grad		328
Anthraquinones and phenolic compounds	<i>Polygonum cuspidatum</i> , root	LtPet-EtOAc-MeOH-water (2:5:4:6) → I + II I: LtPet-EtOAc-water (1:5:5) II: LtPet-EtOAc-MeOH-water (3:5:4:6) → (3:5:7:3)	grad	LP	329
Anthraquinones	<i>Polygonum multiflorum</i> , root	Hex-EtOAc-MeOH-water (3:7:5:5 → (9:1:5:5) EtOAc-MeOH-water (50:1:50) EtOAc-BuOH-water (20:1:20)	stepwise	LP	330
Anthraquinones	<i>Cassia thora</i> , seed	Hex-EtOAc-MeOH-water (4:1:3:2)		LP	331
Aloin A and B	<i>Aloe vera</i> , Aloe powder	CHCl <sub>3</sub> -MeOH-water (4:2:3), EtOAc-MeOH-water (5:1:5), BuOH-EtOAc-water (1:3:4)		LP	332
<b>Lignans</b>					
Clemastanin B, indigoticoside A	<i>Isatis indigotica</i> , root	EtOAc-BuOH-water (2:7:9)		LP	333
Phillyrin	<i>Forsythia suspensa</i> , fruit	Hex-EtOAc-EtOH-water (1:9:1:9)		LP	334
Schizandrin, gomisin A	<i>Schisandra chinensis</i> , fruit	Hex-EtOAc-MeOH-water (1:0.9:0.9:1)		LP	335
Deoxyschisandrin, γ-schisandrin	<i>Schisandra chinensis</i> , fruit	Hex-MeOH-water (35:30:3)		LP	336
Schisandrin, schisantherin	<i>Schisandra chinensis</i> , fruit	Hex-EtOAc-MeOH-water (22:8:20:20)		LP	337
Arctiin	<i>Arctium lappa</i> , fruit	EtOAc-BuOH-EtOH-water (5:0.5:1:5)		UP	338
Neolignans	<i>Ocotea elegans</i> , stem	Hex-EtOAc-MeOH-water (1:2:2:1)		LP	339
Arctigenin and matairesinol	<i>Forsythia koreana</i> , stems	Hex-EtOAc-MeOH-water (1:1:1:1)		LP	340
Pinoresinol diglucoside, liriiodendrin	<i>Eucommia ulmoides</i> , bark	BuOH-AcOH-water (4:1:5)		LP	341
<b>Saponins</b>					
Glycyrrhizin	<i>Glycyrrhiza uralensis</i> , root	EtOAc-MeOH-water (5:2:5)		LP	342
Triterpene saponins	<i>Momordica charantia</i> , fruit	MtBE-BuOH-MeOH-water (1:2:1.5) and		LP	343

		(1:3:1:5)			
Saponin and flavonoid glycosides	<i>Clinopodium chinensis</i> , herb	EtOAc–BuOH–water (5:0.8:5) EtOAc–MeOH–water (5:1:5)	2 step	LP	344
Ginsenosides	<i>Panax ginseng</i> , root	CH <sub>2</sub> Cl <sub>2</sub> –MeOH–isoPrOH–water (6:6:1:4)		LP	345
Triterpene saponins	<i>Clematis mandshurica</i> , root and rhizome	EtOAc–BuOH–EtOH–0.5% TFA (5:10:2:20)		LP	346
Cyclolanostane type saponins	<i>Astragalus membranaceus</i> var. <i>mongholicus</i> , root and rhizome	EtOAc–2-PrOH–water (5:1:5) and (50:1:50)	2 step	LP	347
<b>Terpenoids</b>					
Triterpenoids	<i>Centella asiatica</i> , herb	Hex–BuOH–0.05 M NaOH (5:1:6) → (1:1:X) → (1:2:X) → (1:4:X); X = saturated with 0.05 M NaOH	step-grad	UP	348
Celastrol	<i>Celastrus orbiculatus</i> , root	LtPet–EtOAc–CCl <sub>4</sub> –methanol–water (1:1:8:6:1)		LP	146
Geniposide	<i>Gardenia jasminoides</i>	EtOAc–BuOH–water (2:1.5:3)		LP	349
Rupestonic acid	<i>Artemisia rupestris</i> , root	Hex–EtOAc–MeOH–water (6:4:3.5:6.5) with 0.5% AcOH in stationary phase	2 step	LP	350
Costunolide, dehydrocostuslactone	<i>Aucklandia lappa</i> , root	LtPet–MeOH–water (5:6.5:3.5)		LP	351
Germacrone, curdione	<i>Curcuma wenyujin</i> , rhizome	LtPet–Et <sub>2</sub> O–EtOH–water (5:0.5:4:1)		LP	352
Zeaxanthin	<i>Microcystis aeruginosa</i>	Hex–EtOAc–EtOH–water (8:2:7:3)		LP	353
Triterpenes	<i>Cecropia lyratiloba</i> , root	Hex–EtOAc–MeOH–water (1:2:X:1); X = 0.5 → 0.75 → 1.0 → 1.5 → 2.0	step-grad	LP	354
Harpagoside	<i>Scrophularia ningpoensis</i> , root	EtOAc–BuOH–water (9:1:10)		LP	355
Linderalactone, lindenenol	<i>Lindera strychnifolia</i> , root	LtPet–EtOAc–MeOH–water (5:5:6:4)		LP	356
Pentacyclic triterpene acids	<i>Diospyros kaki</i> , leaf	Hex–EtOAc–MeOH–water (3:6:4:2)		LP	357
Oridonin (diterpenoid)	<i>Rabdosia rubescens</i>	Hex–EtOAc–MeOH–water (1:2:1:2)		LP	358
Canthaxanthin	<i>Chlorella zofingiensis</i>	Hex–EtOH–water (10:9:1)		LP	359
Triterpenoids	<i>Adenophora tetraphylla</i> , root	Hex–EtOAc–CH <sub>3</sub> CN (5:1:5), (5:1:4), (5:2:5) LtPet–EtOAc–EtOH–water (6:4:5:5)		LP	360
Secoiridoids	<i>Gentiana scabra</i> , herb	Hex–BuOH–MeOH–0.4% AcOH (1.4:8:3:15.5)		LP	361
Diterpenoids (oridonin, ponigidin)	<i>Rabdosia rubescens</i>	Hex–EtOAc–MeOH–water (1:5:1:5), (3:5:3:5)	MDCCC	LP	362
Geniposide	<i>Gardenia jasminoides</i> , fruits	EtOAc–isoPrOH–water (3:2:5)		LP	363

Sesquiterpene lactones	<i>Xanthium macrocarpum</i> , leaf	Hept–EtOAc–MeOH–water (1:1:1:1)		UP	364
<b>Miscellaneous</b>					
Shikonin	<i>Lithospermum erythrorhizon</i> , root	Hex–EtOAc–EtOH–water (16:14:14:5)		LP	365
Chuanxiongine	<i>Ligusticum chuanxiong</i> , root	Hex–EtOAc–EtOH–water (5:5:3:7)		LP	366
Isoflavan and pterocarpan glycosides	<i>Astragalus membranaceus</i> var. <i>mongholicus</i> , root	EtOAc–EtOH–AcOH–water (4:1:0.25:5)		LP	367
Tripdiolide	<i>Tripterygium wilfordii</i> , herb	Hex–CH <sub>2</sub> Cl <sub>2</sub> –MeOH–water (3:22:17:8), CHCl <sub>3</sub> –MeOH–water (4:3:2)	MDCCC	LP	368
Aurentiamide acetate	<i>Patrinia villosa</i>	Hex–EtOAc–MeOH–water (1:1.2:1.2:1)		LP	26
Chromone	<i>Aloe vera</i> , leaf	CH <sub>2</sub> Cl <sub>2</sub> –MeOH–water (5:4:2) Hex–EtOAc–MeOH–water (1:5:1:5)		LP	369
Napthoquinones	<i>Plumbago auriculata</i> , root	Hex–EtOAc–MeOH–water (40:10:10:2)	dual mode	UP LP	370
Atractylon, atractylenolide III	<i>Atractylodes macrocephala</i> , root	LtPet–EtOAc–EtOH–water (4:1:4:1)	dual mode	LP UP	371
Trisaccharide fatty acid esters	<i>Morinda citrifolia</i> , fruit	BuOH–water (1:1)		LP	372
Mangiferin, neomangiferin, <i>cis</i> -hinkiresinol, (–)-4'- <i>O</i> -methylnyasol	<i>Anemarrhena asphodeloides</i> , root	BuOH–1% AcOH (1:1) [Mangiferin, neomangiferin] LtPet–EtOAc–MeOH–water (1:1:1.2:0.8) → (1:1:1.4:0.6) [ <i>cis</i> -hinkiresinol, (–)-4'- <i>O</i> -methylnyasol]	grad	LP	373
Mangiferin	<i>Anemarrhena asphodeloides</i> , rhizome	EtOAc–isoPrOH–water (3:2:5)		LP	374
Phthalides	<i>Ligusticum chuanxiong</i> , root	Hex–EtOAc–MeOH–CH <sub>3</sub> CN–water (8:2:5:3:5)		LP	375
Amygdalin	<i>Prunus armeniaca</i> , seed	EtOAc–BuOH–water (1:4:6)		LP	376
Gambogic acid, epigambogic acid	<i>Garcinia hanburyi</i>	Hex–MeOH–water (5:4:1)	MDCCC	LP	377
Mangiferin, neomangiferin, 5-HMF	<i>Anemarrhena asphodeloides</i>	BuOH–water (1:1)	stepwise	LP	378
Cyclic peptide (pseudostellarin B)	<i>Pseudostellaria heterophylla</i> , root	EtOAc–BuOH–water (4.4:0.6:5)		LP	379
Mollugin	<i>Rubia cordifolia</i> , root	LtPet–Et <sub>2</sub> O–EtOH–water (5:3:4:1)		LP	380

<sup>a</sup> Systematic plant name and crude drug.

- <sup>b</sup> AcOH: acetic acid; CH<sub>3</sub>CN: acetonitrile; BuOH: 1-butanol; CHCl<sub>3</sub>: chloroform; CH<sub>2</sub>Cl<sub>2</sub>: methylene chloride; CCl<sub>4</sub>: carbon tetrachloride; Et<sub>2</sub>O: diethyl ether; EtOAc: ethyl acetate; EtOH: ethanol; Hept: heptane; Hex: n-hexane; LtPet: light petroleum; MtBE: methyl *tert*-butyl ether; MeOH: methanol; PE: petroleum ether; PrOH: propanol; TFA: trifluoroacetic acid.
- <sup>c</sup> 2 step: two step elution using either twice the same, or different solvent systems. Between 2 steps, the sample is dried and re-dissolved. Stepwise: either by changing the solvent (→) or by increasing the flow-rate of the solvent. Grad: linear gradient elution. Step-grad: step gradient elution (→). Dual mode: dual-mode elution (LP → UP, or reversed). MDCCC: multidimensional CCC.
- <sup>d</sup> LP: lower phase; MP: mobile phase; UP: upper phase.
- <sup>e</sup> References: 2004–2007.