

Effects of essential oils from Zingiberaceae plants on root-rot disease of *Panax notoginseng*

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Table S1. Chemical composition of the EOs of *A. tsao-ko*.

NO.	Compound Name	Component	Relative content
		RT	(%)
1	2-heptanone	5.82	0.03
2	2-heptanol	6.04	0.22
3	tricyclene	6.62	0.24
4	α -pinene	6.94	3.68
5	camphene	7.35	13.80
6	sabinene	8.04	0.12
7	(-)- β -pinene	8.12	0.58
8	5-hepten-2-one, 6-methyl-	8.42	0.55
9	β -myrcene	8.54	1.51
10	octanal	8.87	0.10
11	α -phellandrene	8.91	0.47
12	3-carene	9.08	0.04
13	α -terpinene	9.27	0.03
14	o-cymene	9.51	0.11
15	β -phellandrene	9.64	8.48
16	eucalyptol	9.70	9.37
17	2-pyrrolidinone, 1-methyl-	9.95	0.09
18	2-octenal, (<i>E</i>)-	10.48	0.05
19	γ -terpinene	10.51	0.05
20	terpinolene	11.38	0.35
21	2-nonanone	11.49	0.08
22	linalool	11.72	0.68
23	(+)-2-bornanone	13.03	0.23

24	bicyclo[2.2.1]heptan-2-ol, 2,3,3-trimethyl-	13.14	0.13
25	6-octenal, 3,7-dimethyl-, (<i>R</i>)-	13.27	0.42
26	<i>endo</i> -borneol	13.39	0.06
27	<i>endo</i> -borneol	13.65	3.04
28	(-)-terpinen-4-ol	13.99	0.27
29	isogeranial	14.13	0.21
30	α -terpineol	14.37	1.82
31	myrtenal	14.54	0.17
32	3-isopropylbenzaldehyde	15.10	0.03
33	citronellol	15.42	0.67
34	benzene, 2-methoxy-4-methyl-1-(1-methylethyl)-	15.62	0.07
35	<i>cis</i> -citral	15.80	8.60
36	geraniol	16.15	1.31
37	geranial	16.63	11.05
38	ethanone, 1-(2-hydroxy-5-methylphenyl)-	16.82	0.04
39	1-bornyl acetate	17.06	0.09
40	thymol	17.20	0.10
41	2-undecanone	17.23	0.19
42	α -copaene	19.57	0.12
43	acetic acid lavandulyl ester	19.73	0.15
44	β -elemene	20.05	0.32
45	(<i>1R,5R</i>)-2-methyl-5-((<i>R</i>)-6-methylhept-5-en-2-yl)bicyclo[3.1.0]hex-2-ene	20.45	0.05
46	caryophyllene	20.92	0.07
47	(<i>1S,5S</i>)-4-methylene-1-((<i>R</i>)-6-methylhept-5-en-2-yl)bicyclo[3.1.0]hexane	22.08	0.18
48	sesquisabinene	22.28	0.08
49	α -curcumene	23.01	2.56
50	zingiberence	23.47	13.18
51	(+)- <i>epi</i> -bicyclosesquiphellandrene	24.07	0.13
52	β -sesquiphellandrene	24.50	4.45
53	(<i>E</i>)-1-methyl-4-(6-methylhept-5-en-2-ylidene)cyclohex-1-ene	24.79	0.09
54	elemol	25.45	0.71
55	<i>trans</i> -sesquisabinene hydrate	25.61	0.19
56	(1 <i>E</i> ,4 <i>E</i>)-germacrene	25.75	0.19
57	(<i>E</i>)-nerolidol	25.99	0.40
58	<i>trans</i> -sesquisabinene hydrate	27.04	0.54

59	(1 <i>R</i> ,4 <i>R</i>)-1-methyl-4-(6-methylhept-5-en-2-yl)cyclohex-2-enol	28.00	0.82
60	β -eudesmol	29.47	0.38
61	3-cyclohexen-1-ol, 1-(1,5-dimethyl-4-hexenyl)-4-methyl-	30.34	0.07
62	phenol, 5-(1,5-dimethyl-4-hexenyl)-2-methyl-,(<i>R</i>)-	33.91	0.02

Table S2. Chemical composition of the EOs of *A. officinarum*.

NO.	Compound Name	Component	Relative content
		RT	(%)
1	heptanal	6.08	0.05
2	α -pinene	6.94	1.49
3	camphene	7.34	0.30
4	benzaldehyde	7.67	0.08
5	(-)- β -pinene	8.13	4.67
6	3-heptanone	8.20	0.01
7	sulcatone	8.43	0.03
8	β -myrcene	8.54	1.30
9	octanal	8.87	0.23
10	α -phellandrene	8.91	0.15
11	3-carene	9.08	0.06
12	acetic acid, hexyl ester	9.19	0.01
13	isoterpinolene	9.27	0.02
14	o-cymene	9.51	0.27
15	β -phellandrene	9.63	0.96
16	eucalyptol	9.69	0.65
17	<i>trans</i> - β -ocimene	9.90	0.03
18	2-pyrrolidinone, 1-methyl-	9.95	0.08
19	β -ocimene	10.20	0.08
20	γ -terpinene	10.51	0.05
21	acetophenone	10.73	0.02

22	1-octanol	10.85	0.22
23	<i>trans</i> -linalool oxide (furanoid)	10.92	0.30
24	linalool	11.77	20.25
25	fenchol	12.14	0.08
26	(<i>E</i>)-4,8-dimethylnona-1,3,7-triene	12.21	0.53
27	(+)-2-bornanone	13.03	0.19
28	cycloprop[a]indene, 1,1a,6,6a-tetrahydro-	13.22	0.07
29	benzenepropanal	13.55	0.13
30	<i>endo</i> -borneol	13.65	0.37
31	1-nonanol	13.79	0.02
32	(-)-terpinen-4-ol	13.99	0.18
33	α -terpineol	14.37	1.12
34	4-decenal, (<i>E</i>)-	14.45	0.90
35	decanal	14.78	1.06
36	acetic acid, octyl ester	14.95	0.90
37	citronellol	15.41	0.54
38	benzene, 2-methoxy-4-methyl-1-(1-methylethyl)-	15.62	0.12
39	neral	15.78	0.09
40	2-butanone, 4-phenyl-	15.86	0.12
41	10-dodecenol	15.99	0.06
42	geraniol	16.15	0.67
43	5-decen-1-ol, (<i>E</i>)-	16.22	1.92
44	2-decenal, (<i>E</i>)-	16.34	0.16
45	1-decanol	16.64	5.02
46	bornyl acetate	17.05	0.10
47	1-bornyl acetate	17.05	0.10
48	thymol	17.21	0.07
49	acetic acid, nonyl ester	17.69	0.05
50	<i>trans</i> -geranic acid methyl ester	18.05	0.08
51	(+/-)- δ -elemene	18.46	0.01
52	citronellol acetate	18.85	0.15
53	3-phenyl-1-propanol, acetate	19.36	0.57
54	α -copaene	19.57	0.57
55	(<i>Z</i>)-dec-4-en-1-yl propyl carbonate	19.90	3.70
56	benzene propanol, α -methyl-, acetate	20.11	0.16
57	decyl acetate	20.56	7.03
58	caryophyllene	20.95	12.79
59	(+)- <i>epi</i> -bicy closesquiphel landrene	21.23	0.05

60	γ -elemene	21.35	0.04
61	1,4,7,-cycloundecatriene, 1,5,9,9-tetramethyl-,Z,Z,Z-	22.05	5.11
62	8-dodecenol	22.16	0.11
63	ethyl cinnamate	22.37	0.78
64	1-dodecanol	22.64	0.11
65	(+)- γ -cadinene	22.81	0.29
66	α -curcumene	23.00	2.40
67	(+)- β -selinene	23.17	0.19
68	zingiberene	23.45	0.84
69	pentadecane	23.56	0.57
70	aciphyllene	23.60	0.51
71	aromandendrene	23.91	0.40
72	(+)- γ -cadinene	24.15	0.35
73	1-isopropyl-4,7-dimethyl-1,2,3,5,6,8a-	24.49	1.00
74	(+)-valencene	24.92	0.11
75	α -calacorene	25.22	0.10
76	(1E,4E)-germacreneb	25.75	0.08
77	nerolidol	26.01	4.14
78	caryophyllene oxide	26.77	2.66
79	guaiol	27.37	0.23
80	(1S,3aS,4S,5S,7aR,8R)-5-isopropyl-1,7a-dimethyloctahydro-1h-1,4-methanoinden-8-ol	27.61	0.20
81	n-butyl cinnamate	28.55	0.11
82	di- <i>epi</i> -1,10-cubenol	28.60	0.17
83	farnesol	32.61	0.37
84	ethyl <i>p</i> -methoxycinnamate	34.01	0.06
85	trifluoroacetyl-lavandulol	38.00	0.03