Supporting information

Comprehensive chemical analysis of triterpenoids and polysaccharides in the medicinal mushroom *Antrodia cinnamomea*

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Table 1S. Intra-day, inter-day, intra-batch, and storage variation of the UPLC/UV method to determine triterpenoids.

	E1	**E2**	**E16**	**E17**	**L1**	**L3**	**L5**	**L9**	**E22**	**E23**	**E29**	**E30**	**L10**
Intra-day variation (n=6)													
Peak area	107802	176893	141269	87291	196619	358305	14707	284386	197282	291089	187563	124831	188
RSD (%)	0.73	0.72	0.80	0.70	0.86	0.94	1.80	0.97	0.77	0.81	0.80	0.81	4.85
Inter-day variation (n=3)													
Peak area	110082	180845	141054	89433	201335	367158	15431	290381	202972	299605	192056	127744	197
RSD (%)	0.28	0.22	1.15	0.38	0.38	0.39	0.66	0.57	1.42	2.12	1.95	1.59	1.93
Intra-batch variation (n=6)													
Peak area	107243	175141	137276	83411	191592	349150	15100	279784	195725	289118	185250	123855	195
RSD (%)	0.91	0.90	2.43	2.82	2.57	2.32	2.93	1.83	4.04	3.77	3.17	3.86	4.51
Stability (n=6)													
Peak area	109611	179930	141449	88925	200286	362297	15167	284140	202444	299171	192622	127047	202
RSD (%)	1.32	1.33	1.06	1.47	1.70	2.39	4.03	1.45	2.56	3.15	4.18	3.02	2.77

Table 2S. Linearity range of monosaccharides by using IC/PAD.

Sugar	Curve	R^2	Range (μg/mL)		LOQ
fuc	$y = 0.817x + 0.284$	0.999	1.0	20.0	0.02
ara	$y = 1.216x + 0.571$	0.999	1.0	20.0	0.03
gal	$y = 1.495x + 1.229$	0.998	1.0	40.0	0.04
glu	$y = 1.730x + 1.513$	0.999	1.0	40.0	0.07
xyl	$y = 1.892x + 0.674$	0.999	1.0	20.0	0.08
man	$y = 1.226x + 0.480$	0.998	1.0	20.0	0.14
fru	$y = 0.901x + 0.293$	0.999	1.0	20.0	0.31

gal, D-galactose; ***glu***, D-glucose; ***fru***, L-fructose; ***ara***, L-arabinose; ***xyl***, D-xylose; ***man***, D-mannose; ***fuc***, L-fucose. LOQ, limit of quantitation, referring to the concentration when the signal-to-noise ratio equals to 10.

Table 3S. Contents of 7 monosaccharides in hydrolyzed products of *A. cinnamomea* samples.

No.	Polysacchride composition (mg/g)							
	fuc	***ara***	***gal***	***glu***	***xyl***	***man***	***fru***	Sum
Wood culture, fruiting bodies								
S1	ND	ND	0.24	2.93	ND	ND	ND	3.2
S2	0.23	ND	36.01	95.10	4.20	8.24	ND	143.8
S3	0.04	ND	0.75	5.84	BL	BL	ND	6.7
S10	0.31	ND	1.02	4.93	BL	BL	ND	6.3
S11	ND	ND	2.01	11.88	0.35	1.27	ND	15.5
Wood culture, mycelia								
S4	1.26	ND	8.54	14.77	1.82	1.10	ND	27.5
S5	1.22	ND	7.95	14.02	1.53	0.97	ND	25.7
S6	1.04	6.87	26.16	58.51	13.33	15.09	16.11	137.1
S12	2.82	ND	4.21	33.89	1.69	2.99	1.62	47.2
Dish culture								
S13	1.30	ND	16.86	74.49	1.44	4.79	21.07	120.0
S14	1.32	ND	10.84	34.32	BL	2.63	13.07	62.3
Solid support culture (commercial)								
S9	0.58	13.88	19.40	51.36	16.00	10.54	8.29	120.0
S15	ND	24.91	20.44	147.19	33.55	23.34	18.43	267.9
Submerged fermentation (commercial)								
S7	4.65	48.04	119.82	108.38	48.46	41.08	46.24	416.7
S8	ND	1.38	5.14	12.66	1.85	1.35	1.85	24.2

gal, D-galactose; ***glu***, D-glucose; ***fru***, L-fructose; ***ara***, L-arabinose; ***xyl***, D-xylose; ***man***, D-mannose; ***fuc***, L-fucose. BL, below the limit of quantitation (S/N=10), ND, not detected.

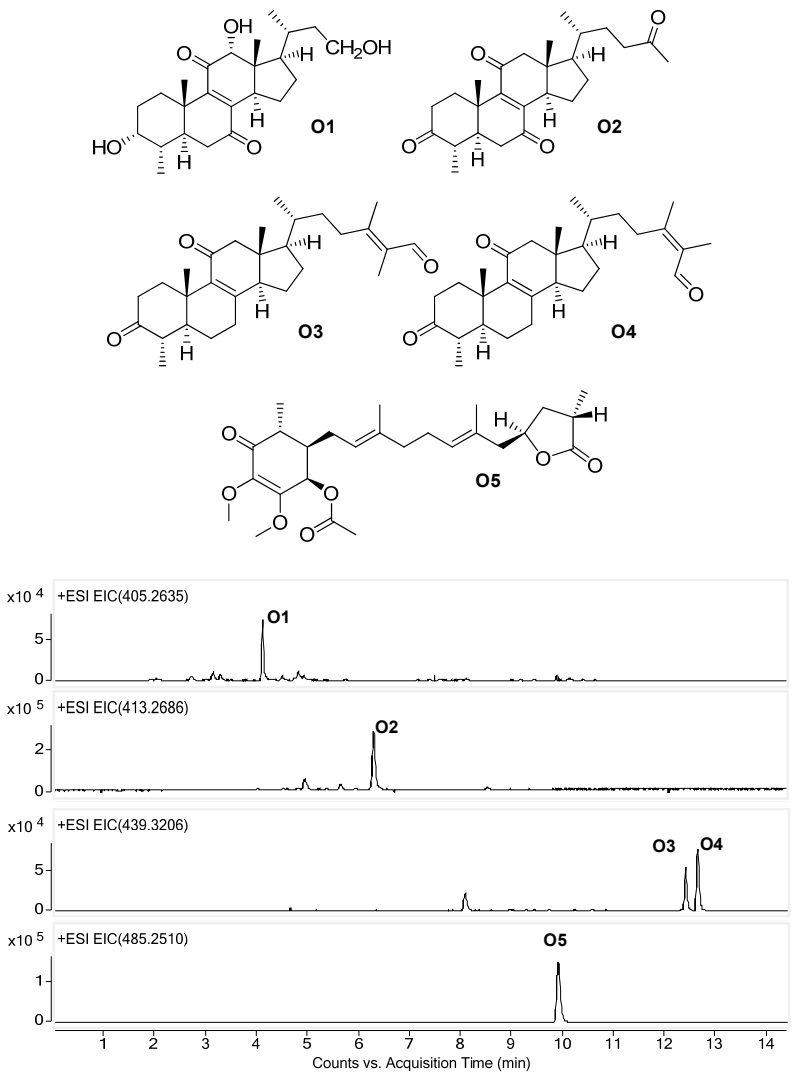

Figure 1S. Chemical structures and extracted ion chromatograms of norergostanes, sesquiterpenoid, cyclohexenones in *A. cinnamomea*.

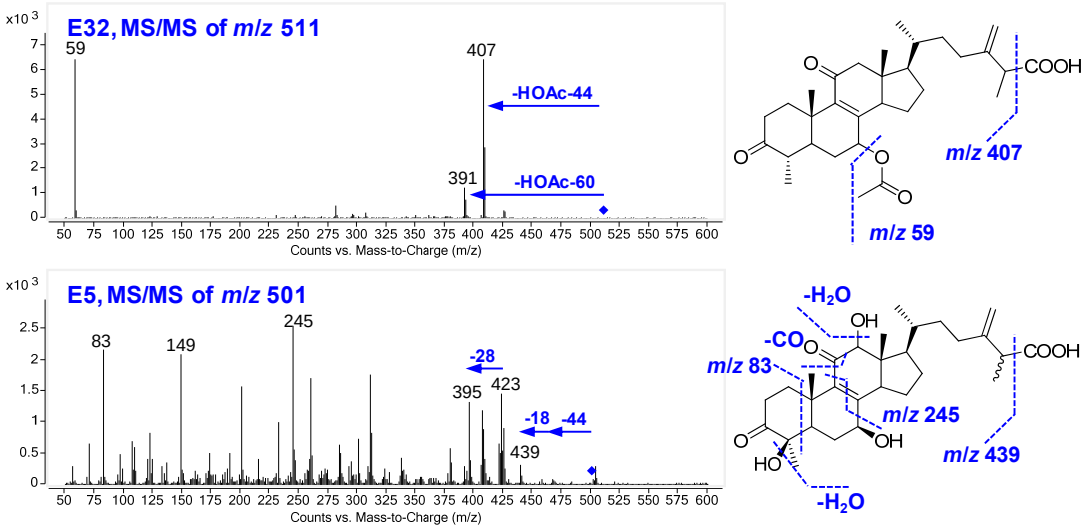

Figure 2S. (-)-ESI-MS/MS spectra of ergostanes **E32** and **E5**.

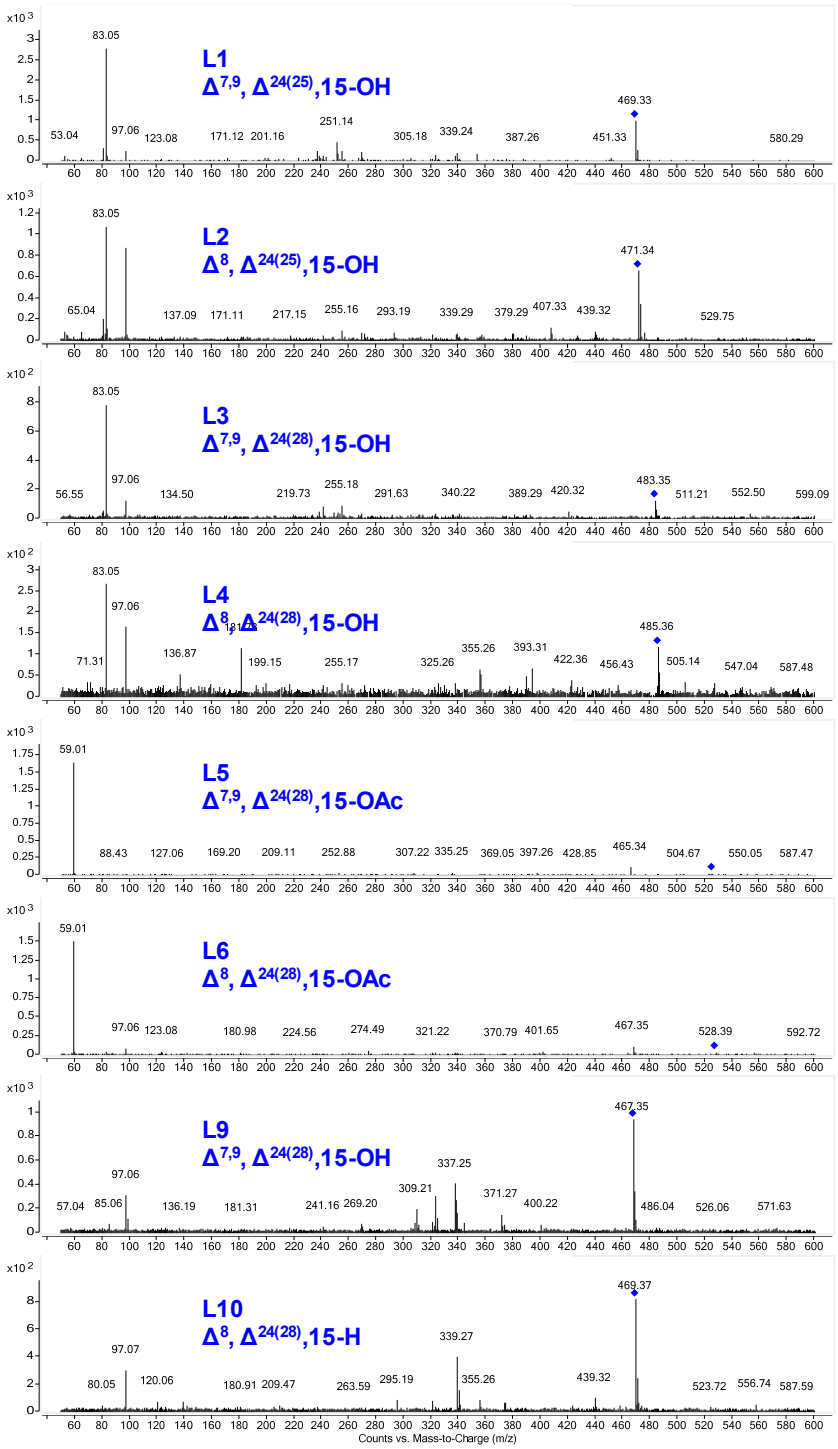

Figure 3S. (-)-ESI MS/MS spectra of 6 lanostane authentic references and two unknown lanostanes (**L2**, **L6**).

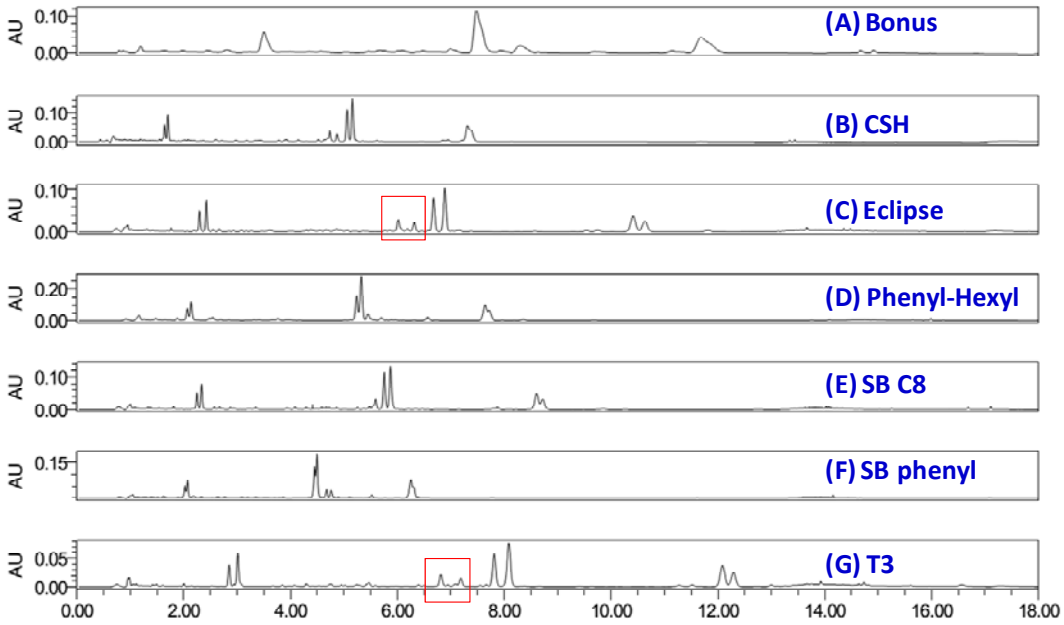

Figure 4S. Effect of different stationary phases (270 nm).

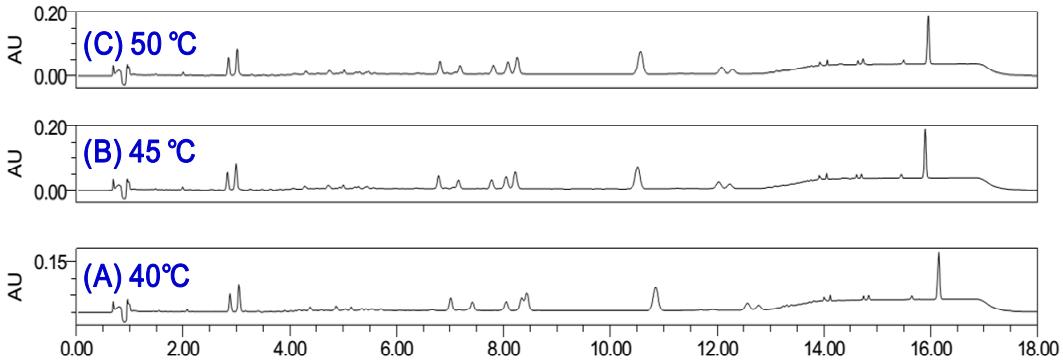

Figure 5S. Effect of different column temperatures.

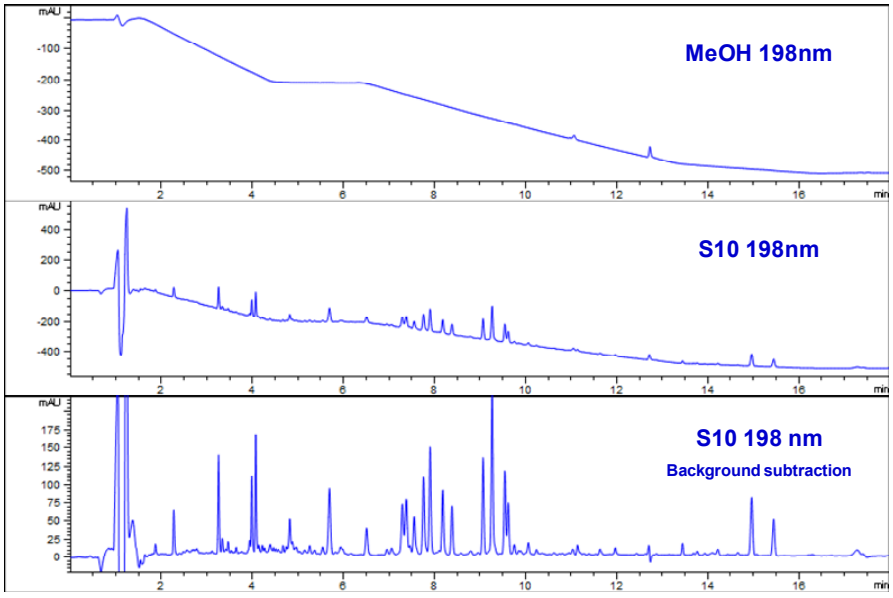

Figure 6S. Effect of background subtraction to the chromatogram of S10 at 198 nm.