

Supporting information

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Figure S1. TIC overlaps of quality control samples and XIC of multi-peak detection plots of metabolites. TIC by mass spectrometry detection (A, B) and XIC in the MRM mode (C, D). A and C were acquired in positive ionization mode. B and D were acquired in negative ionization mode.

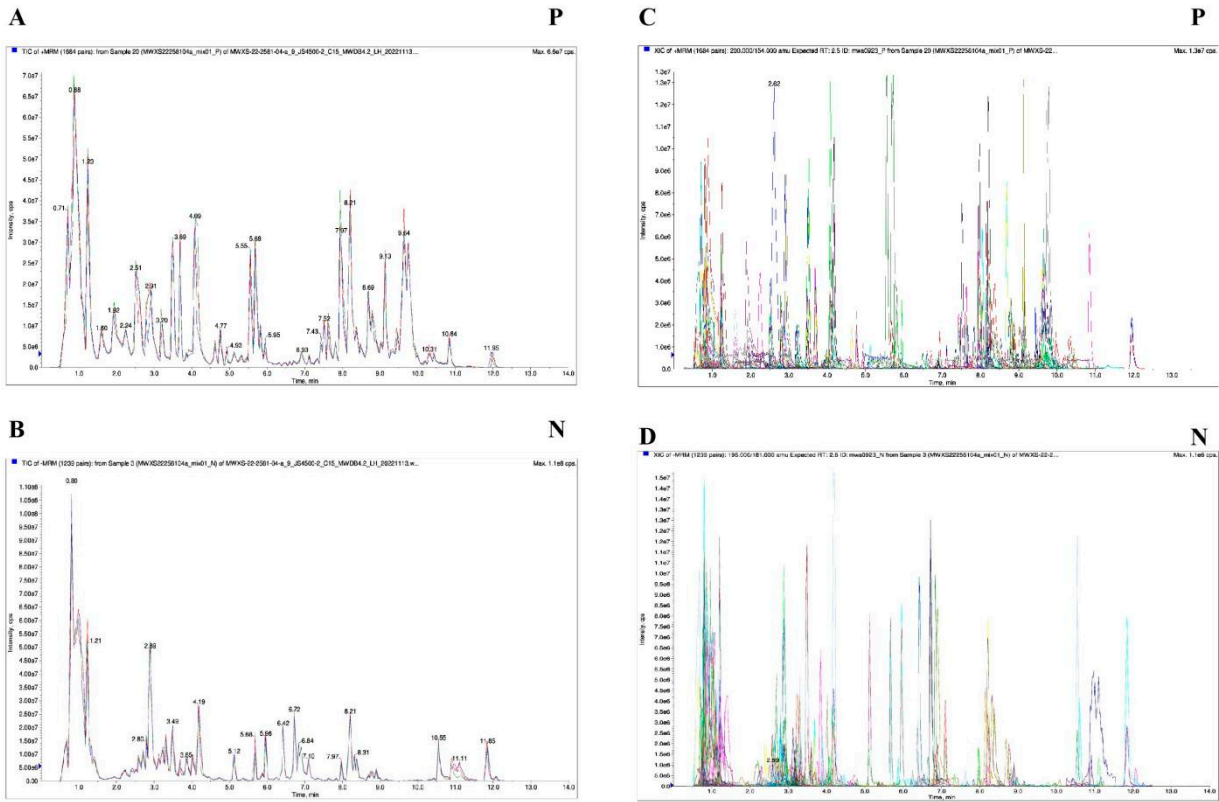


Figure S2. PCA scores plot of quality spectrum data.

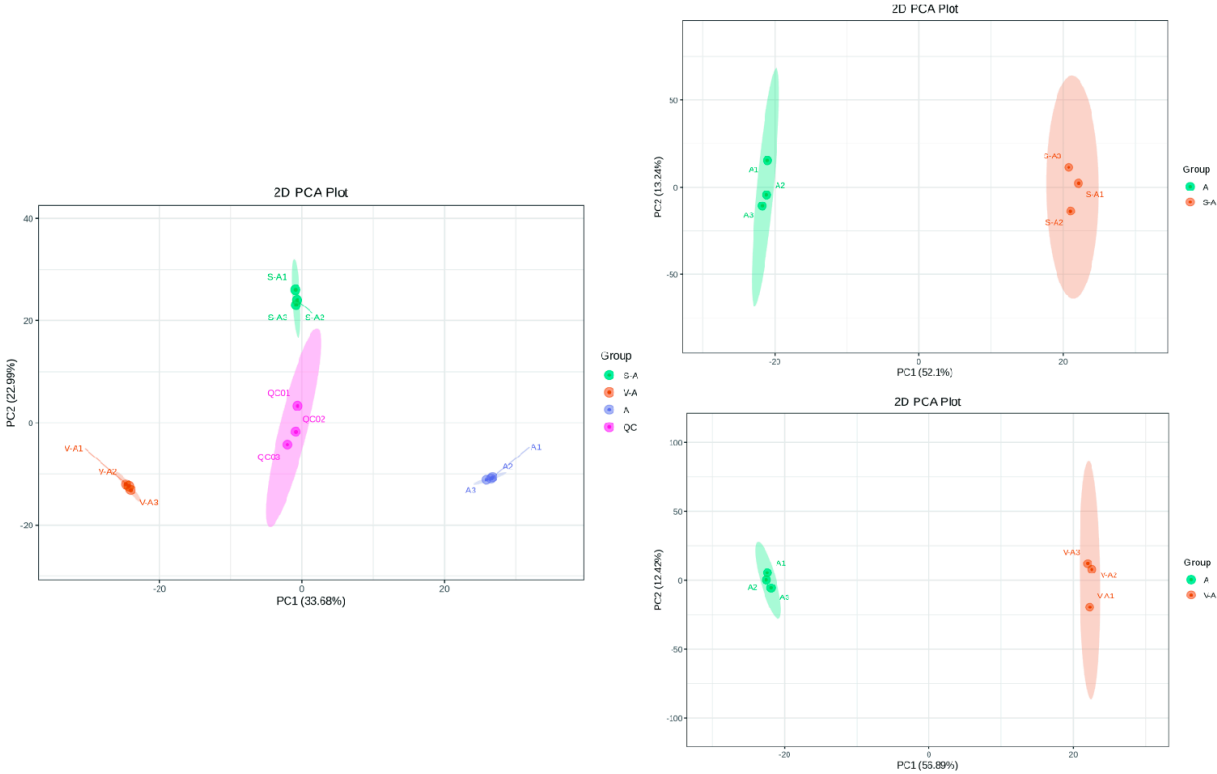


Figure S3. Score plot, S-plot, and verification diagram of OPLS-DA. OPLS-DA score plot (A), OPLS-DA S-plot (B), and OPLS-DA verification diagram (C) of different groups.

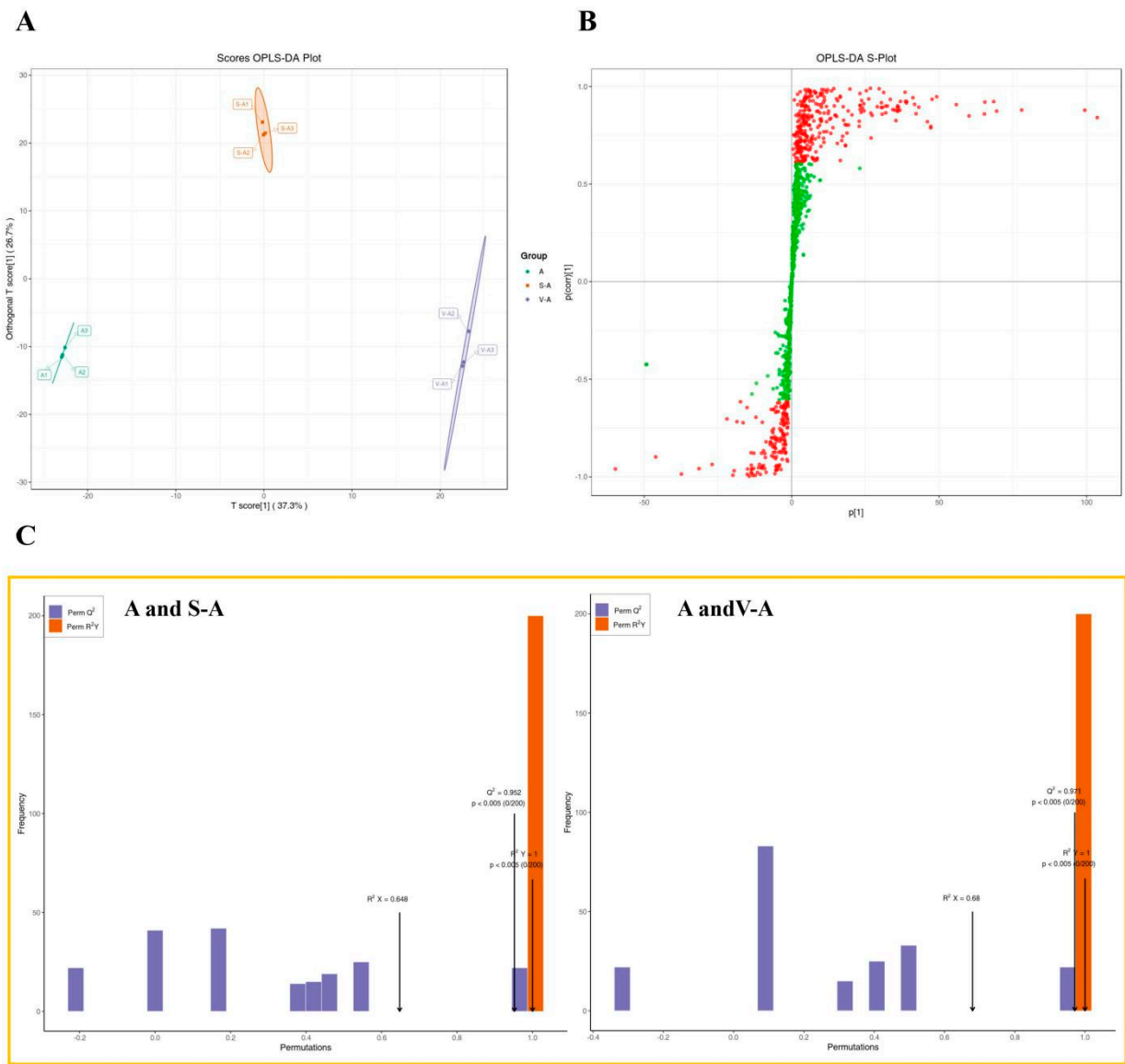


Figure S4. The relative contents of the typical compounds in A, S-A, and V-A..

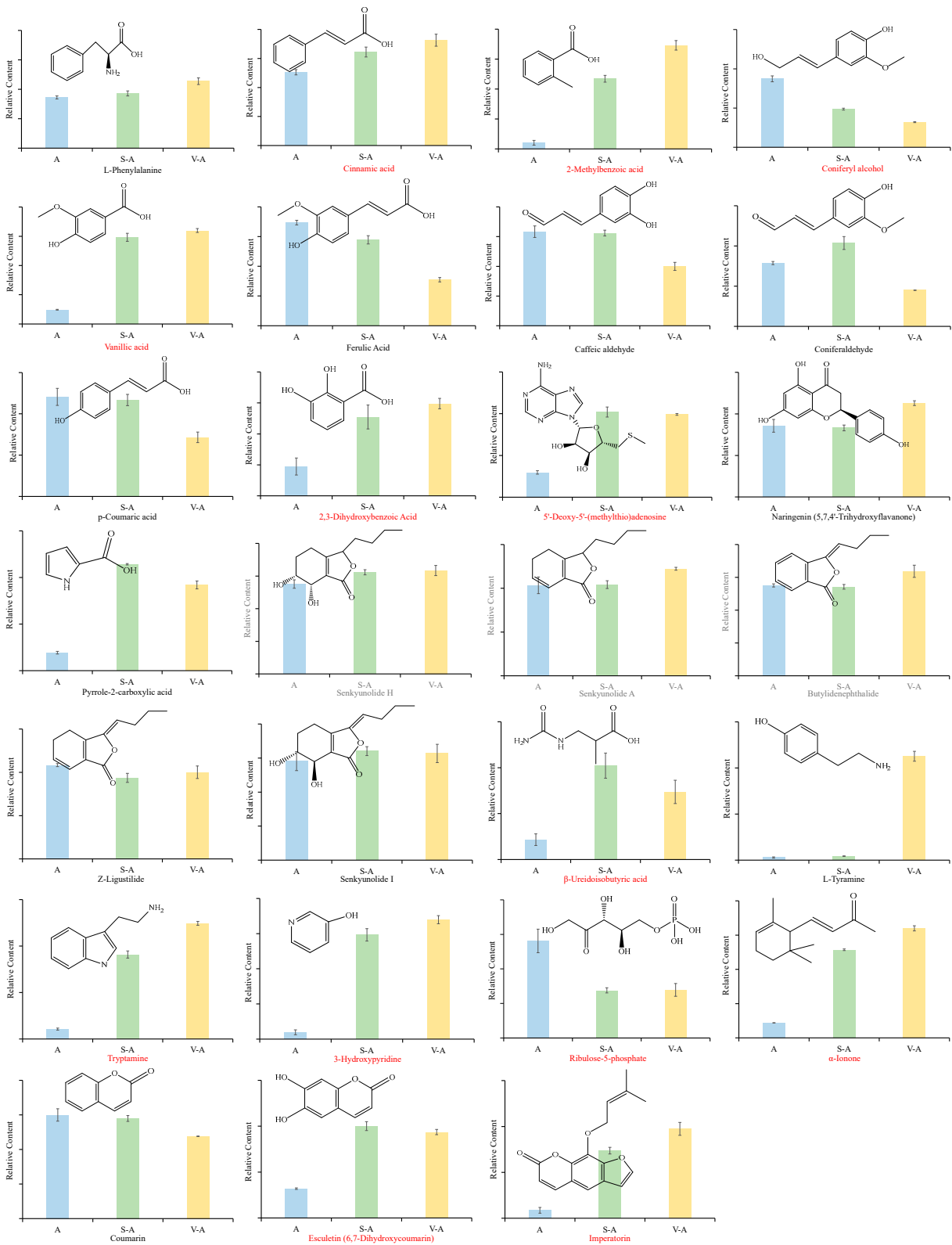


Figure S5. Plots of clustering heatmaps, dynamic distribution, and radar map analysis between A and S-A. Clustering heatmaps (A), dynamic distribution (B), and radar map (C)..

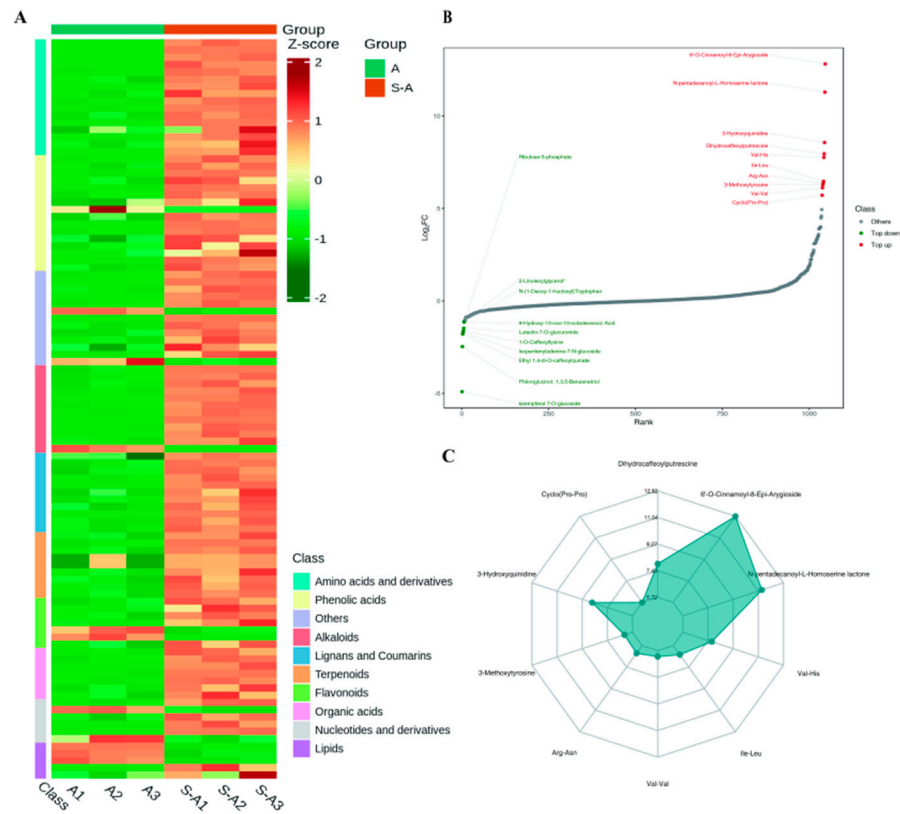


Figure S6. Plots of clustering heatmaps, dynamic distribution, and radar map analysis between A and V-A. Clustering heatmaps (A), dynamic distribution (B), and radar map (C).

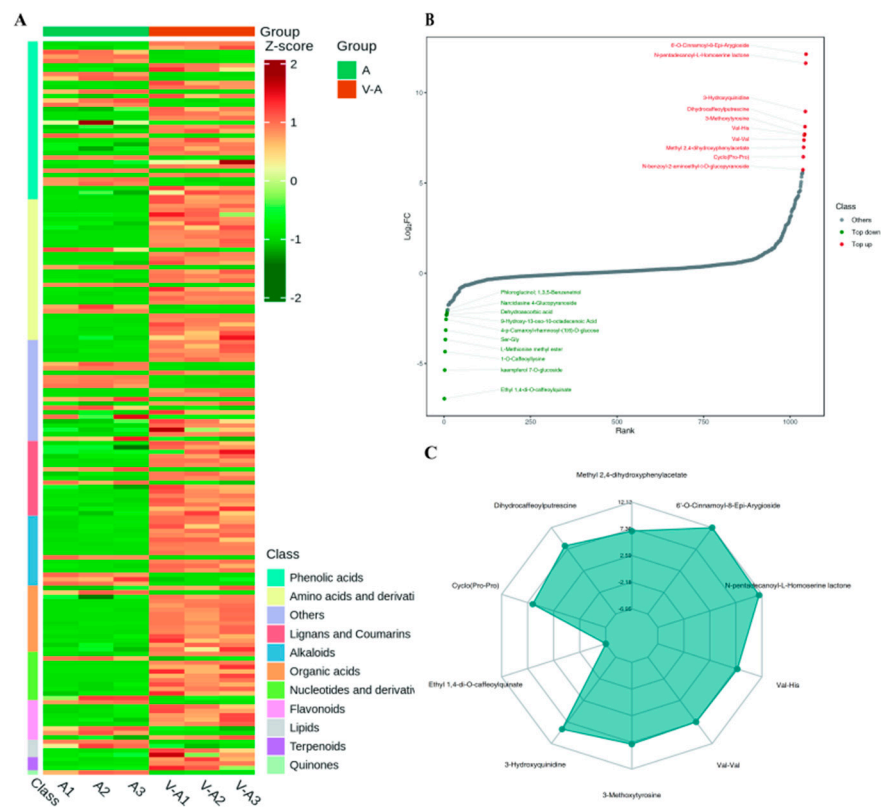


Figure S7. Cluster heat map analysis of various differential compounds.

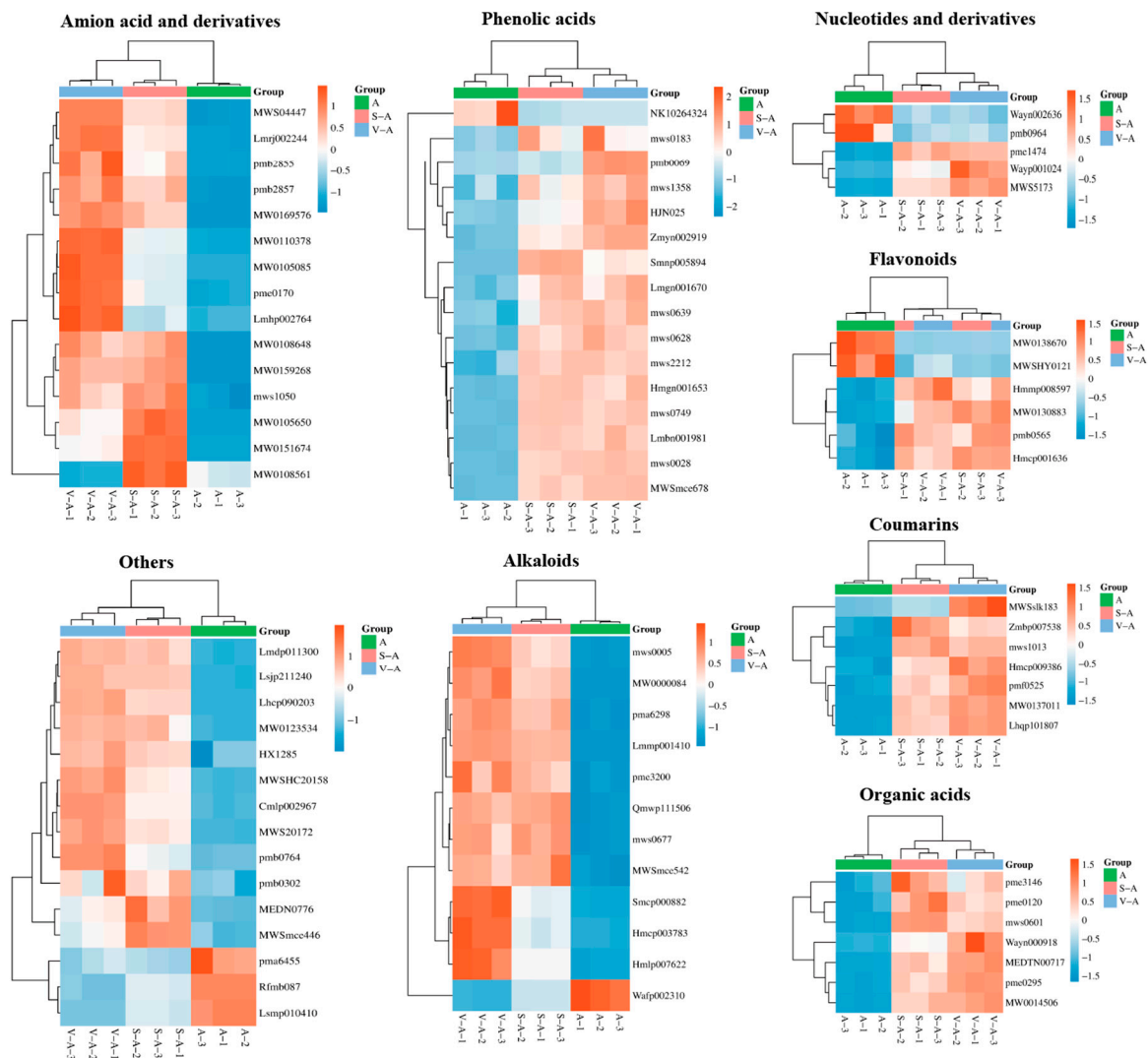


Table S1 Sample information collection sheet. *A. Sinensis* sample number, plant origin, site of tissue, processed sample and group.

Number	Plant Origin	Site of Tissue	Processed sample	Group
A1	<i>A. Sinensis</i>	Dried Root	<i>A. Sinensis</i>	A
A2	<i>A. Sinensis</i>	Dried Root	<i>A. Sinensis</i>	A
A3	<i>A. Sinensis</i>	Dried Root	<i>A. Sinensis</i>	A
S-A1	<i>A. Sinensis</i>	Dried Root	Stir-fry <i>A. Sinensis</i>	S-A
S-A2	<i>A. Sinensis</i>	Dried Root	Stir-fry <i>A. Sinensis</i>	S-A
S-A3	<i>A. Sinensis</i>	Dried Root	Stir-fry <i>A. Sinensis</i>	S-A
V-A1	<i>A. Sinensis</i>	Dried Root	Vinegar <i>A. Sinensis</i>	V-A
V-A2	<i>A. Sinensis</i>	Dried Root	Vinegar <i>A. Sinensis</i>	V-A
V-A3	<i>A. Sinensis</i>	Dried Root	Vinegar <i>A. Sinensis</i>	V-A

Table S2. 83 differential compounds of *A. sinensis* during processing.

Num.	Index	Formula	Compounds	Class I	A	S-A	V-A	VIP	P-value
1	Lmhp002764	C ₁₁ H ₁₈ N ₂ O ₂	Cyclo(Proline-Leucine)	Amino acids and derivatives	1.80×10^4	5.55×10^4	1.56×10^5	1.62	1.68×10^{-6}
2	Lmrj002244	C ₁₀ H ₁₄ N ₂ O ₂	Cyclo(Proline-Proline)	Amino acids and derivatives	1.32×10^4	6.95×10^5	1.15×10^6	1.49	3.66×10^{-8}
3	MW0105085	C ₁₀ H ₁₃ NO ₄	3-Methoxytyrosine	Amino acids and derivatives	5.77×10^3	4.51×10^5	1.20×10^6	1.51	4.33×10^{-8}
4	MW0105650	C ₁₀ H ₂₀ N ₆ O ₄	Arginine-Asparagine	Amino acids and derivatives	2.13×10^4	1.75×10^6	9.71×10^5	1.30	1.07×10^{-6}
5	MW0108561	C ₉ H ₁₈ N ₄ O ₄	<i>N</i> 2-(1-Carboxyethyl)-L-arginine	Amino acids and derivatives	3.26×10^5	7.54×10^5	8.01×10^4	1.01	5.02×10^{-7}
6	MW0108648	C ₁₃ H ₁₇ NO ₄	Ethyl <i>N</i> -acetyl-L-tyrosinate	Amino acids and derivatives	2.02×10^4	6.20×10^5	6.14×10^5	1.41	5.77×10^{-5}
7	MW0110378	C ₁₀ H ₂₀ N ₂ O ₃	Valine-Valine	Amino acids and derivatives	1.78×10^3	1.24×10^5	2.95×10^5	1.51	8.32×10^{-11}
8	MW0151674	C ₁₂ H ₂₄ N ₂ O ₃	Isoleucine-Leucine	Amino acids and derivatives	4.03×10^3	3.58×10^5	1.84×10^5	1.29	4.79×10^{-9}
9	MW0159268	C ₁₁ H ₁₈ N ₄ O ₃	Valine-Histidine	Amino acids and derivatives	3.26×10^4	7.07×10^6	6.54×10^6	1.41	8.25×10^{-7}
10	MW0169576	C ₁₉ H ₃₅ NO ₃	<i>N</i> -pentadecanoyl-L-Homoserine lactone	Amino acids and derivatives	9.00	2.26×10^4	2.86×10^4	1.44	5.04×10^{-8}
11	MWS04447	C ₆ H ₁₁ NO ₂	Homoproline	Amino acids and derivatives	5.71×10^5	1.66×10^6	2.17×10^6	1.55	4.95×10^{-10}
12	mws1050	C ₅ H ₉ NO ₄	<i>O</i> -Acetylserine	Amino acids and derivatives	1.77×10^5	6.40×10^5	5.47×10^5	1.29	2.24×10^{-5}
13	pmb2855	C ₁₁ H ₂₀ N ₂ O ₈	L-Glutamine- <i>O</i> -glycoside	Amino acids and derivatives	5.47×10^4	8.20×10^5	1.31×10^6	1.51	1.13×10^{-4}

14	pmb2857	C ₁₁ H ₁₉ NO ₉	L-Glutamic acid- <i>O</i> -glycoside	Amino acids and derivatives	1.35 × 10 ⁴	2.00 × 10 ⁵	2.46 × 10 ⁵	1.46	1.19 × 10 ⁻⁵
15	pme0170	C ₈ H ₁₆ N ₄ O ₃	<i>N</i> -Acetyl-L-Arginine	Amino acids and derivatives	1.01 × 10 ⁵	2.67 × 10 ⁵	4.99 × 10 ⁵	1.62	7.48 × 10 ⁻⁷
16	HJN025	C ₇ H ₈ O ₂	4-Hydroxybenzyl Alcohol	Phenolic acids	2.32 × 10 ³	2.55 × 10 ⁴	5.34 × 10 ⁴	1.49	1.65 × 10 ⁻⁵
17	Hmgn001653	C ₇ H ₆ O ₃	Protocatechualdehyde	Phenolic acids	1.78 × 10 ⁵	1.71 × 10 ⁶	1.63 × 10 ⁶	1.40	1.12 × 10 ⁻⁵
18	Lmbn001981	C ₇ H ₆ O ₃	2,5-Dihydroxybenzaldehyde	Phenolic acids	2.49 × 10 ⁵	2.18 × 10 ⁶	2.20 × 10 ⁶	1.41	8.16 × 10 ⁻⁶
19	Lmgn001670	C ₇ H ₆ O ₃	Salicylic acid	Phenolic acids	1.01 × 10 ⁵	2.20 × 10 ⁵	2.23 × 10 ⁵	1.36	2.36 × 10 ⁻³
20	mws0028	C ₈ H ₈ O ₄	Vanillic acid	Phenolic acids	2.92 × 10 ⁵	1.78 × 10 ⁶	1.92 × 10 ⁶	1.45	1.34 × 10 ⁻⁷
21	mws0183	C ₇ H ₆ O ₄	3,4-Dihydroxybenzoic acid (Protocatechuic acid)*	Phenolic acids	2.13 × 10 ⁵	8.96 × 10 ⁵	9.81 × 10 ⁵	1.31	6.56 × 10 ⁻²
22	mws0628	C ₇ H ₆ O ₂	4-Hydroxybenzaldehyde	Phenolic acids	4.09 × 10 ⁵	8.60 × 10 ⁵	9.27 × 10 ⁵	1.46	2.93 × 10 ⁻⁵
23	mws0639	C ₇ H ₆ O ₄	2,3-Dihydroxybenzoic Acid*	Phenolic acids	1.89 × 10 ⁵	5.09 × 10 ⁵	5.96 × 10 ⁵	1.40	9.82 × 10 ⁻⁴
24	mws0749	C ₇ H ₆ O ₃	4-Hydroxybenzoic acid	Phenolic acids	4.48 × 10 ⁵	2.44 × 10 ⁶	2.35 × 10 ⁶	1.40	3.26 × 10 ⁻⁷
25	mws1358	C ₆ H ₆ O ₂	Pyrocatechol	Phenolic acids	2.09 × 10 ⁴	4.38 × 10 ⁴	5.42 × 10 ⁴	1.41	3.10 × 10 ⁻³
26	mws2212	C ₉ H ₈ O ₄	Caffeic acid	Phenolic acids	2.73 × 10 ⁶	1.06 × 10 ⁷	1.06 × 10 ⁷	1.32	1.46 × 10 ⁻⁴
27	MWSmce678	C ₁₁ H ₁₄ O ₃	Deoxyarbutin	Phenolic acids	6.37 × 10 ⁴	2.36 × 10 ⁵	2.63 × 10 ⁵	1.47	2.22 × 10 ⁻⁷
28	NK10264324	C ₆ H ₆ O ₃	Phloroglucinol; 1,3,5-Benzenetriol	Phenolic acids	1.32 × 10 ⁶	2.37 × 10 ⁵	3.21 × 10 ⁵	1.18	2.44 × 10 ⁻²
29	pmb0069	C ₇ H ₇ NO	Benzamide	Phenolic acids	2.54 × 10 ⁴	5.16 × 10 ⁴	1.97 × 10 ⁵	1.60	9.83 × 10 ⁻⁸
30	Smnp005894	C ₂₅ H ₂₈ O ₁₂	6'- <i>O</i> -Cinnamoyl-8-Epi-Arygioside	Phenolic acids	9.00	6.49 × 10 ⁴	4.04 × 10 ⁴	1.38	5.08 × 10 ⁻⁷
31	Zmyn002919	C ₈ H ₈ O ₂	2-Methylbenzoic acid	Phenolic acids	2.07 × 10 ³	2.35 × 10 ⁴	3.46 × 10 ⁴	1.48	5.30 × 10 ⁻⁷
32	MWS5173	C ₄ H ₅ N ₃ O	Isocytosine	Nucleotides and derivatives	1.02 × 10 ⁶	2.80 × 10 ⁶	3.50 × 10 ⁶	1.53	7.62 × 10 ⁻⁸
33	pmb0964	C ₁₆ H ₂₃ N ₅ O ₅	Isopentenyladenine-7-N-glucoside	Nucleotides and derivatives	7.06 × 10 ⁵	2.17 × 10 ⁵	2.54 × 10 ⁵	1.14	1.21 × 10 ⁻²
34	pme1474	C ₁₁ H ₁₅ N ₅ O ₃ S	5'-Deoxy-5'-(methylthio)adenosine	Nucleotides and derivatives	1.19 × 10 ⁷	4.08 × 10 ⁷	3.97 × 10 ⁷	1.40	1.82 × 10 ⁻⁶
35	Wayn002636	C ₁₇ H ₂₂ N ₂ O ₇	<i>N</i> -(1-Deoxy-1-fructosyl)Tryptophan	Nucleotides and derivatives	2.57 × 10 ⁶	1.21 × 10 ⁶	1.13 × 10 ⁶	1.44	2.62 × 10 ⁻⁵

				Nucleotides and					
36	Wayp001024	C ₁₁ H ₂₁ NO ₇	<i>N</i> -(1-Deoxy-1-fructosyl)Valine	derivatives	1.03×10^4	2.47×10^5	4.89×10^5	1.53	4.60×10^{-5}
37	Hmcp001636	C ₂₃ H ₂₄ O ₁₃	Limocitrin-7- <i>O</i> -glucoside	Flavonoids	7.72×10^4	1.82×10^5	1.67×10^5	1.31	3.76×10^{-5}
			4,4'-Dihydroxy-2'-methoxychalcone						
38	Hmmp008597	C ₁₆ H ₁₄ O ₄	(3-Deoxysappanchalcone)	Flavonoids	1.04×10^4	4.99×10^4	6.57×10^4	1.48	5.58×10^{-5}
39	MW0130883	C ₁₉ H ₁₈ O ₅	2-Methyl-5,7,8-trimethoxyisoflavone	Flavonoids	4.46×10^4	1.16×10^5	1.23×10^5	1.43	9.92×10^{-4}
40	MW0138670	C ₂₁ H ₂₀ O ₁₁	kaempferol 7- <i>O</i> -glucoside	Flavonoids	1.08×10^6	3.60×10^4	2.62×10^4	1.47	3.80×10^{-6}
41	MWSHY0121	C ₂₁ H ₁₈ O ₁₂	Luteolin-7- <i>O</i> -glucuronide	Flavonoids	7.43×10^4	2.67×10^4	3.33×10^4	1.18	1.75×10^{-4}
42	pmb0565	C ₂₃ H ₂₄ O ₁₃	Syringetin-3- <i>O</i> -glucoside	Flavonoids	7.08×10^4	1.59×10^5	1.58×10^5	1.35	5.52×10^{-4}
				Lignans and					
43	Hmcp009386	C ₁₆ H ₁₄ O ₄	Alloimperatorin	Coumarins	1.04×10^4	4.89×10^4	6.52×10^4	1.48	7.28×10^{-6}
			4-(3-Methoxy-4-hydroxy)phenyl-3-met	Lignans and					
44	HX1285	C ₁₂ H ₁₄ O ₃	hyl-3-buten-2-one	Coumarins	1.63×10^5	4.50×10^5	5.09×10^5	1.18	1.29×10^{-3}
				Lignans and					
45	Lhqp101807	C ₁₅ H ₁₆ O ₃	Osthole	Coumarins	8.76×10^5	9.72×10^6	1.21×10^7	1.47	1.08×10^{-8}
			7-Hydroxy-3-(4-methoxyphenyl)-4-me	Lignans and					
46	MW0137011	C ₁₇ H ₁₄ O ₄	thylcoumarin	Coumarins	9.00×10^5	7.97×10^6	9.47×10^6	1.47	5.57×10^{-8}
				Lignans and					
47	mws1013	C ₉ H ₆ O ₄	Esculetin (6,7-Dihydroxycoumarin)	Coumarins	2.55×10^5	8.01×10^5	7.49×10^5	1.37	1.45×10^{-6}
				Lignans and					
48	MWSslk183	C ₁₅ H ₁₀ O ₄	7,8-Dihydroxy-4-phenylcoumarin	Coumarins	1.16×10^4	3.19×10^4	1.27×10^5	1.62	9.30×10^{-6}
				Lignans and					
49	pmf0525	C ₁₆ H ₁₄ O ₄	Imperatorin	Coumarins	6.90×10^3	5.90×10^4	7.79×10^4	1.46	4.76×10^{-6}
				Lignans and					
50	Zmbp007538	C ₁₄ H ₁₄ O ₃	Osthenol	Coumarins	8.33×10^4	2.13×10^5	1.75×10^5	1.21	2.82×10^{-5}
51	Hmcp003783	C ₁₃ H ₁₀ N ₂ O	1-Acetyl-β-carboline	Alkaloids	1.35×10^4	1.19×10^5	3.03×10^5	1.59	5.84×10^{-8}
52	Hmlp007622	C ₁₈ H ₂₉ NO ₃	Decanoyl vanillylamide	Alkaloids	6.70×10^6	1.35×10^7	2.13×10^7	1.62	2.31×10^{-6}
53	Lmmp001410	C ₁₃ H ₂₀ N ₂ O ₃	Dihydrocaffeoylputrescine	Alkaloids	7.41×10^3	1.84×10^6	2.06×10^6	1.43	2.84×10^{-12}
54	MW0000084	C ₂₀ H ₂₄ N ₂ O ₃	3-Hydroxyquinidine	Alkaloids	4.58×10^3	1.74×10^6	2.28×10^6	1.44	4.54×10^{-7}

55	mws0005	C ₁₀ H ₁₂ N ₂	Tryptamine	Alkaloids	8.49×10^4	7.27×10^5	9.96×10^5	1.50	2.54×10^{-8}
56	mws0677	C ₁₂ H ₁₄ N ₂ O ₂	N-Acetyl-5-hydroxytryptamine	Alkaloids	4.21×10^5	1.28×10^6	1.21×10^6	1.36	2.89×10^{-5}
57	MWSmce542	C ₁₂ H ₁₄ N ₂ O ₂	(S)-Indoximod	Alkaloids	1.07×10^5	3.04×10^5	2.79×10^5	1.34	3.34×10^{-5}
58	pma6298	C ₅ H ₅ NO	3-Hydroxypyridine	Alkaloids	1.94×10^4	2.97×10^5	3.40×10^5	1.44	5.49×10^{-7}
59	pme3200	C ₂ H ₇ N ₃	1-Methylguanidine	Alkaloids	1.31×10^4	1.30×10^5	1.57×10^5	1.42	1.11×10^{-4}
60	Qmwp111506	C ₂₁ H ₂₉ NO	1-Methyl-2-[(Z)-6-undecyl]-4(1H)-quinolone N-benzoyl-2-aminoethyl-β-D-glucopyranoside	Alkaloids	2.25×10^4	8.10×10^4	7.74×10^4	1.39	8.37×10^{-7}
61	Smcp000882	C ₁₅ H ₂₁ NO ₇	anose	Alkaloids	1.08×10^4	2.41×10^5	5.70×10^5	1.55	1.99×10^{-8}
62	Wafp002310	C ₁₅ H ₂₀ N ₂ O ₅	1-O-Caffeoyllysine	Alkaloids	1.83×10^6	5.97×10^5	9.05×10^4	1.61	3.30×10^{-7}
63	MEDTN00717	C ₂₀ H ₂₆ O ₃	4-Oxoretinoic acid	Organic acids	7.48×10^3	7.72×10^4	9.76×10^4	1.47	4.63×10^{-6}
64	MW0014506	C ₂₀ H ₂₈ O ₃	4-Hydroxyretinoic acid	Organic acids	3.92×10^5	3.91×10^6	4.61×10^6	1.46	2.79×10^{-6}
65	mws0601	C ₅ H ₅ NO ₂	Pyrrole-2-carboxylic acid	Organic acids	3.08×10^4	1.83×10^5	1.47×10^5	1.31	6.80×10^{-8}
66	pme0120	C ₅ H ₁₁ NO ₂	5-Aminovaleric acid	Organic acids	8.62×10^4	2.46×10^5	2.07×10^5	1.26	1.42×10^{-4}
67	pme0295	C ₆ H ₁₁ NO ₃	4-Acetamidobutyric acid	Organic acids	2.89×10^5	6.13×10^5	7.12×10^5	1.52	1.96×10^{-7}
68	pme3146	C ₅ H ₁₀ N ₂ O ₃	β-Ureidoisobutyric acid	Organic acids	3.46×10^3	1.64×10^4	1.18×10^4	1.16	1.14×10^{-3}
69	Wayn000918	C ₁₈ H ₂₈ O ₁₇	Isocitric acid-1-O-diglucoside	Organic acids	8.48×10^4	3.23×10^5	5.61×10^5	1.58	2.08×10^{-4}
70	Lmdp011300	C ₁₇ H ₂₀ O ₄	Angeloyl Senkyunolide F	Others	1.82×10^6	4.37×10^6	4.72×10^6	1.47	7.76×10^{-7}
71	Lsjp211240	C ₆ H ₆ N ₂ O	Nicotinamide	Others	1.59×10^6	2.48×10^7	2.71×10^7	1.44	1.02×10^{-7}
72	Lsmp010410	C ₂₇ H ₂₈ O ₁₂	Ethyl 1,4-di-O-caffeoylquininate	Others	3.27×10^6	9.43×10^5	2.65×10^4	1.57	3.08×10^{-7}
73	pmb0302	C ₂ H ₈ NO ₃ P	2-Aminoethylphosphonate	Others	1.82×10^4	4.25×10^4	4.46×10^4	1.20	5.08×10^{-2}
74	pmb0764	C ₆ H ₉ NOS	4-Methyl-5-thiazoleethanol	Others	3.42×10^4	1.90×10^5	4.22×10^5	1.59	1.06×10^{-6}
75	MWS20172	C ₆ H ₆ O ₃	5-Hydroxymethylfurfural	Others	2.54×10^5	4.02×10^6	5.93×10^6	1.50	1.32×10^{-7}
76	MWSHC20158	C ₆ H ₆ O ₃	5-Methoxyfurfural	Others	3.03×10^5	3.66×10^6	5.84×10^6	1.51	4.84×10^{-7}
77	Lhcp090203	C ₁₃ H ₂₀ O	α-Ionone	Others	4.41×10^5	2.57×10^6	3.20×10^6	1.49	3.19×10^{-9}
78	MW0123534	C ₁₀ H ₁₈ O ₂	delta-Decalactone	Others	6.04×10^5	3.72×10^6	4.22×10^6	1.46	1.24×10^{-4}
79	MWSmce446	C ₂₂ H ₂₈ O ₁₁	Cimifugin-7-O-glucoside	Others	2.02×10^4	1.35×10^5	6.95×10^4	1.02	3.73×10^{-5}
80	MEDN0776	C ₂₀ H ₃₂ O ₄	5,15-DiHETE	Lipids	1.85×10^5	2.96×10^6	1.63×10^6	1.21	3.44×10^{-4}
81	Rfmb087	C ₁₈ H ₃₂ O ₄	9-Hydroxy-13-oxo-10-octadecenoic	Lipids	4.94×10^5	2.23×10^5	9.95×10^4	1.62	3.72×10^{-8}

			Acid						
82	pma6455	C ₅ H ₁₁ O ₈ P	Ribulose-5-phosphate	Others	2.53×10^5	1.24×10^5	1.25×10^5	1.34	1.12×10^{-3}
83	Cmlp002967	C ₁₀ H ₁₂ O ₅	Gentiolactone	Terpenoids	8.90×10^3	7.69×10^4	1.29×10^5	1.53	2.69×10^{-9}

Table S3. Grey correlation degree analysis. Grey correlation degree analysis between differential components and antioxidant activity of *A. sinensis* and its processed products.

Numbe r	DPPH free radical scavenging		Hydroxyl free radical scavenging		T-AOC	
	Chemical composition	Correlatio n degree	Chemical composition	Correlatio n degree	Chemical composition	Correlatio n degree
1	mws0628	0.857	mws0628	0.814	mws0628	0.851
2	pmb0565	0.856	pme0295	0.81	pme0295	0.844
3	Hmcp001636	0.849	pmb0565	0.809	Hmcp001636	0.843
4	pme0295	0.847	Hmcp001636	0.805	pmb0565	0.84
5	mws1358	0.847	Lmgn001670	0.805	Zmbp007538	0.838
6	Lmgn001670	0.84	Zmbp007538	0.801	Lmgn001670	0.835
7	Hmlp007622	0.836	pmb0302	0.793	Lmdp011300	0.829
8	Zmbp007538	0.835	Lmdp011300	0.793	pme0120	0.821
9	Lmdp011300	0.834	mws1358	0.792	mws1358	0.819
10	pme0120	0.827	pma6455	0.786	pmb0302	0.815
11	MW0130883	0.825	pme0120	0.785	MWSmce542	0.815
12	MWSmce542	0.821	MWSmce542	0.779	HX1285	0.813
13	HX1285	0.816	HX1285	0.779	MWS5173	0.808
14	pmb0302	0.813	MWS5173	0.774	mws0677	0.804
15	mws1013	0.812	mws0677	0.769	MWS04447	0.802
16	mws0639	0.811	MWS04447	0.769	mws1013	0.8
17	MWS5173	0.805	MW0130883	0.768	MW0130883	0.799
18	mws0677	0.802	mws1013	0.765	mws1050	0.79
19	pme1474	0.798	Wayn002636	0.763	pme1474	0.788
20	MWS04447	0.797	Hmlp007622	0.761	Qmwp111506	0.783
21	mws1050	0.796	mws1050	0.755	mws0639	0.783
22	Qmwp111506	0.794	mws0639	0.754	Hmlp007622	0.779
23	mws2212	0.784	pme1474	0.754	mws2212	0.777
24	MWSmce678	0.779	Qmwp111506	0.75	MWSmce678	0.777
25	Wayn000918	0.776	MWSmce678	0.744	mws0183	0.765
26	pme0170	0.773	MWSHY0121	0.743	pme3146	0.764

27	mws0601	0.767	mws2212	0.743	pma6455	0.76
28	pme3146	0.76	pme3146	0.738	Hmcp009386	0.757
29	mws0749	0.757	mws0183	0.736	mws0601	0.749
30	Hmmp008597	0.757	Hmcp009386	0.732	Hmmp008597	0.748
31	Hmcp009386	0.756	Hmmp008597	0.724	mws0749	0.748
32	pma6455	0.754	Wayn000918	0.721	Lhcp090203	0.745
33	mws0183	0.749	MWSmce446	0.72	MWSmce446	0.744
34	MW0123534	0.747	pmb0964	0.72	mws0028	0.74
35	mws0028	0.744	mws0601	0.716	Wayn002636	0.739
36	Lhcp090203	0.742	mws0749	0.716	Wayn000918	0.734
37	Wayn002636	0.736	Lhcp090203	0.714	mws0005	0.733
38	Cmlp002967	0.732	Cmlp002967	0.714	pmf0525	0.732
39	Lmbn001981	0.731	pme0170	0.712	Zmyn002919	0.728
40	Hmgcn001653	0.73	mws0028	0.709	pme0170	0.727
41	pmf0525	0.726	mws0005	0.703	MW0123534	0.727
42	mws0005	0.725	pmf0525	0.702	Cmlp002967	0.727
43	pme3200	0.724	MWSHC2015 8	0.701	pme3200	0.725
44	MW0137011	0.724	MW0123534	0.701	MW0137011	0.724
45	pmb2855	0.722	Zmyn002919	0.701	Lmbn001981	0.724
46	MWSHC2015 8	0.722	MW0108561	0.698	MWSHC2015 8	0.722
47	MW0014506	0.72	Rfmb087	0.697	MWS20172	0.722
48	HJN025	0.72	pme3200	0.696	MW0014506	0.721
49	MEDTN00717	0.72	MEDTN00717	0.695	MWSHY0121	0.72
50	Zmyn002919	0.719	MW0137011	0.694	Hmgcn001653	0.72
51	pmb0764	0.717	MWS20172	0.693	MEDTN00717	0.719
52	Lhqp101807	0.716	Lmbn001981	0.693	Lhqp101807	0.719
53	Wayp001024	0.713	MW0014506	0.691	MW0151674	0.713

54	MWS20172	0.712	Hmgn001653	0.69	pmb2857	0.713
55	MWSHY0121	0.711	Lmrj002244	0.689	Lmrj002244	0.712
56	pmb2857	0.71	Lhqp101807	0.689	MW0105650	0.712
57	pma6298	0.709	MEDN0776	0.688	MEDN0776	0.712
58	Lsjp211240	0.708	MW0151674	0.686	pma6298	0.708
59	MWSmce446	0.708	pmb2855	0.686	MW0108561	0.708
60	Lmrj002244	0.706	pmb2857	0.684	Lsjp211240	0.705
61	MW0108648	0.705	MW0105650	0.681	pmb2855	0.703
62	MEDN0776	0.704	pma6298	0.679	pmb0964	0.698
63	Smcp000882	0.698	Lsjp211240	0.676	Smnp005894	0.697
64	Smnp005894	0.697	Wayp001024	0.67	MW0108648	0.697
65	MW0110378	0.693	HJN025	0.668	MW0000084	0.694
66	MW0159268	0.692	MW0108648	0.668	MW0169576	0.692
67	Lmhp002764	0.692	Smnp005894	0.666	Wayp001024	0.687
68	Hmcp003783	0.69	MW0000084	0.666	Lmmp001410	0.685
69	pmb0964	0.69	MW0169576	0.664	MW0159268	0.683
70	MW0000084	0.689	pmb0764	0.662	Rfmb087	0.68
71	MW0105650	0.689	Lmmp001410	0.657	HJN025	0.68
72	Rfmb087	0.688	MW0159268	0.654	pmb0764	0.675
73	MW0169576	0.688	NK10264324	0.651	Smcp000882	0.652
74	Lmmp001410	0.687	Smcp000882	0.64	Lmhp002764	0.65
75	MW0108561	0.684	MW0110378	0.635	MW0110378	0.647
76	MW0151674	0.68	Lmhp002764	0.634	Hmcp003783	0.646
77	MW0105085	0.673	Hmcp003783	0.633	NK10264324	0.636
78	pmb0069	0.658	MW0105085	0.619	MW0105085	0.631
79	MWSslk183	0.643	Wafp002310	0.618	pmb0069	0.622
80	NK10264324	0.629	pmb0069	0.605	MWSslk183	0.608
81	Wafp002310	0.616	Lsmp010410	0.594	Wafp002310	0.607

82	Lsmp010410	0.594	MWSslk183	0.592	Lsmp010410	0.585
83	MW0138670	0.5	MW0138670	0.502	MW0138670	0.502
