

Table legends

Table S1 Results of spectral preprocessing and variable screening of Acanthopanax
PLSR model

Table S2 Results of spectral preprocessing and variable screening of Acanthopanax
SVR model

Table S3 PLSR indicators verify the paired T-test results of the measured and predicted
values

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values

PLSR model

Components	Parameters of the model								
	Pretreatment	Variable selection	LV	RMSEC (		RMSECV (		RMSECP (	
	methods	methods	s	%)	R^2_c	%)	R^2_{cv}	%)	R^2_p
Moisture	MSC+S-G	Full	10	0.143	0.9284	0.148	0.6410	0.205	0.8332
	MSC	CARS	6	0.090	0.9713	0.061	0.9359	0.248	0.7553
	2nd	VCPA-GA	4	0.115	0.9535	0.129	0.8270	0.176	0.8776
	Der+SNV+S-G								
	2nd	VCPA-IRIV	4	0.078	0.9892	0.178	0.7487	0.186	0.8633
	Der+SNV+S-G								
Total solids	MSC+S-G	SPA	10	0.183	0.8815	0.149	0.6411	0.198	0.8445
	SNV	Full	11	0.522	0.9745	0.561	0.4478	0.812	0.6607
	1 st Der+MSC+S-G	CARS	4	0.455	0.9619	0.494	0.8281	1.119	0.4200
	S-G	VCPA-GA	9	0.921	0.8436	0.743	0.7388	0.847	0.6303
	1 st Der+SNV	VCPA-IRIV	8	0.364	0.9756	0.367	0.9316	0.872	0.6084
	1 st Der+SNV+S-G	SPA	6	0.823	0.8752	0.824	0.5670	0.832	0.6437
Protocatechuic acid	1 st Der+S-G	Full	6	0.004	0.9589	0.007	0.7189	0.004	0.7706
	1st Der+MSC+S-G	CARS	5	0.002	0.9811	0.003	0.9385	0.003	0.8311
	SNV	VCPA-GA	10	0.004	0.9458	0.006	0.8213	0.004	0.8118
	SNV	VCPA-IRIV	10	0.003	0.9520	0.005	0.8262	0.004	0.7592
	SNV+S-G	SPA	10	0.005	0.9327	0.007	0.8192	0.005	0.7130
	MSC	Full	10	0.024	0.8878	0.055	0.4545	0.028	0.4603
Chlorogenic acid	1 st Der+S-G	CARS	5	0.012	0.9694	0.017	0.9125	0.026	0.5096
	1 st Der	VCPA-GA	10	0.019	0.9257	0.035	0.7594	0.032	0.3124
	1 st Der+MSC	VCPA-IRIV	10	0.022	0.8992	0.034	0.7091	0.031	0.3435

	Raw	SPA	10	0.019	0.9238	0.064	0.3103	0.048	0.2501
	1 st Der+S-G	Full	5	0.006	0.8650	0.015	0.2310	0.007	0.6478
	Raw	CARS	10	0.007	0.8261	0.005	0.8819	0.007	0.6855
Syringin	MSC+S-G	VCPA-GA	10	0.007	0.7844	0.012	0.4576	0.008	0.5278
	SNV+S-G	VCPA-IRIV	11	0.006	0.8463	0.013	0.4908	0.007	0.6503
	1 st Der	SPA	10	0.005	0.9066	0.014	0.3030	0.010	0.3641

Table S2 Results of spectral preprocessing and variable screening of Acanthopanax
SVR model

Components	Pretreatment methods	Variable selection	R^2_c	RMSEC (%)	R^2_p	RMSECP (%)
		methods				
Moisture	MSC	Full	0.8728	0.190	0.8680	0.182
	MSC	CARS	0.9932	0.044	0.8003	0.224
	S-G	VCPA-GA	0.9611	0.105	0.8221	0.212
	2nd Der+SNV+S-G	VCPA-IRIV	0.9889	0.056	0.8314	0.206
	MSC+S-G	SPA	0.8733	0.190	0.8649	0.184
	1st Der	Full	0.8644	0.857	0.7466	0.702
	2nd Der+MSC+S-G	CARS	0.9891	0.243	0.5975	0.884
Total solids	S-G	VCPA-GA	0.8197	0.988	0.7967	0.797
	Raw	VCPA-IRIV	0.8546	0.888	0.6253	0.853
	1st Der+S-G	SPA	0.7936	1.058	0.6930	0.693
	S-G	Full	0.9669	0.003	0.8257	0.004
	S-G	CARS	0.8747	0.006	0.8376	0.003
Protocatechuic acid	SNV	VCPA-GA	0.9526	0.003	0.7438	0.004
	MSC+S-G	VCPA-IRIV	0.9518	0.004	0.8806	0.003
	SNV+S-G	SPA	0.9413	0.004	0.8516	0.003
	SNV	Full	0.6558	0.041	0.5149	0.026
	1 st Der+S-G	CARS	0.9945	0.005	0.5667	0.025
Chlorogenic acid	1 st Der	VCPA-GA	0.9919	0.006	0.1707	0.034
	1 st Der+MSC	VCPA-IRIV	0.8938	0.023	0.1956	0.034
	Raw	SPA	0.4323	0.053	0.2380	0.033
	Raw	Full	0.9908	0.002	0.7299	0.006
	MSC+S-G	CARS	0.9244	0.004	0.5511	0.008
Syringin	MSC+S-G	VCPA-GA	0.6067	0.010	0.6759	0.007
	SNV+S-G	VCPA-IRIV	0.7968	0.007	0.6276	0.007

1 st Der	SPA	0.6533	0.009	0.2272	0.108
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Table S3 PLSR indicators verify the paired T-test results of the measured and predicted values

Indexes	Pairing difference		t	P value
	Average	Standard deviation		
Moisture	-0.0005	0.1198	-0.042	0.967
Total solids	-0.0558	0.6195	-0.891	0.375
Protocatechuic acid	0.0001	0.0028	0.511	0.611
Chlorogenic acid	-0.0015	0.0176	-0.843	0.401
syringin	0.0007	0.0065	1.088	0.279

Table S4 SVR indicators verify the paired T-test results of the measured and predicted values

Indexes	Pairing difference		t	P value
	Average	Standard deviation		
Moisture	0.0220	0.1429	1.526	0.130
Total solids	0.0138	0.8199	0.167	0.868
Protocatechuic acid	-0.0001	0.0036	-0.199	0.843
Chlorogenic acid	-0.0001	0.0140	-0.697	0.488
syringin	0.0002	0.0037	0.399	0.691