

## **Supplementary material**

### **Quality grade evaluation and related research of Forsythia suspensa from different places on the market**

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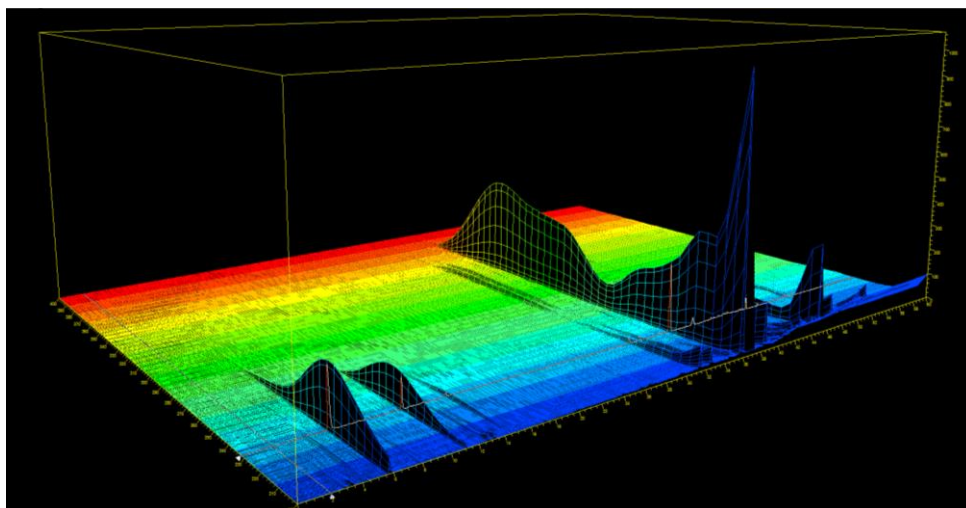
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**Table S1.** Forsythia forsythia and its seed number and information

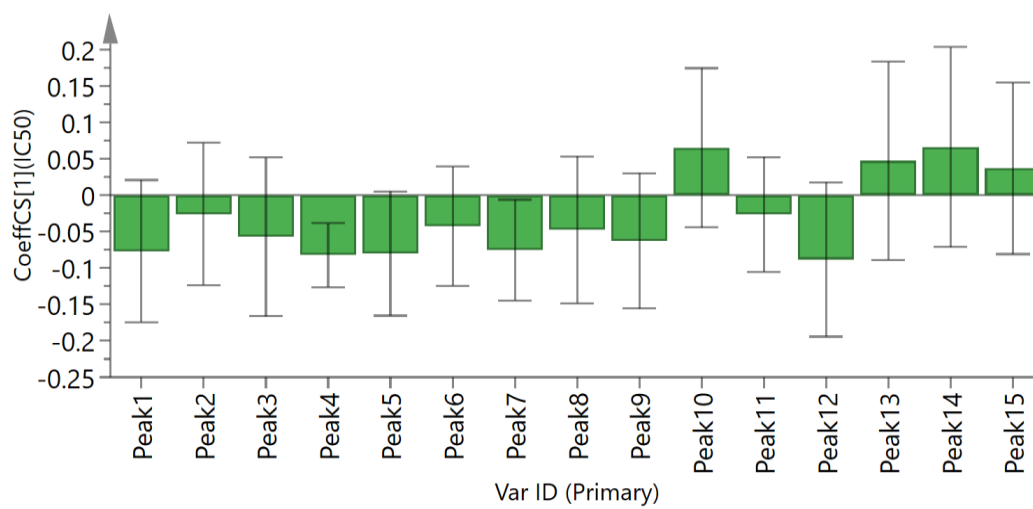
Para.	Variety	Source	Para.	Variety	Source
S1	Qingqiao	Yangcheng, Shanxi	Z1	Qingqiao	Yangcheng, Shanxi
S2	Laoqiao	Yangcheng, Shanxi	Z2	Qingqiao	Changzhi, Shanxi
S3	Qingqiao	Changzhi, Shanxi	Z3	Laoqiao	Changzhi, Shanxi
S4	Laoqiao	Changzhi, Shanxi	Z4	Qingqiao	Lantian, Shaanxi
S5	Qingqiao	Lantian, Shaanxi	Z5	Laoqiao	Lantian, Shaanxi
S6	Laoqiao	Lantian, Shaanxi	Z6	Laoqiao	Shangluo, Shaanxi
S7	Qingqiao	Shangluo, Shaanxi	Z7	Laoqiao	Xingping, Shaanxi
S8	Laoqiao	Shangluo, Shaanxi	Z8	Laoqiao	Baoji, Shaanxi
S9	Laoqiao	Xingping, Shaanxi	Z9	Laoqiao	Nanyang, Henan
S10	Laoqiao	Baoji, Shaanxi	Z10	Laoqiao	Yichuan, Henan
S11	Qingqiao	Nanyang, Henan	Z11	Qingqiao	Yichuan, Henan
S12	Laoqiao	Nanyang, Henan	Z12	Qingqiao	Xinxiang, Henan
S13	Qingqiao	Yichuan, Henan	Z13	Laoqiao	Xinxiang, Henan
S14	Laoqiao	Yichuan, Henan	Z14	Laoqiao	Luoning, Henan
S15	Qingqiao	Xinxiang, Henan	Z15	Qingqiao	Shangluo, Shaanxi
S16	Laoqiao	Xinxiang, Henan			
S17	Laoqiao	Luoning, Henan			



**Fig. S1.** Three dimensional chromatogram of sample

**Table S2.** RSD of Relative retention time and Relative peak area

Relative retention time(%)			Relative peak area(%)				
Para.	Precision	Repeatability	Stability	Para.	Precision	Repeatability	Stability
G1	0.03	0.08	0.05	G1	0.1	0.3	0.1
G2	0.05	0.10	0.03	G2	1.1	0.4	0.6
G3	0.03	0.07	0.02	G3	0.4	0.4	0.3
G4	0.10	0.03	0.01	G4	0.9	0.8	0.9
G5	0.01	0.02	0.03	G5	0.3	0.6	0.4
G6	0.01	0.01	0.00	G6	0.2	1.5	0.4
G7	0.01	0.03	0.02	G7	0.2	0.7	1.2
G8	0.01	0.02	0.04	G8	0.1	0.2	0.1
G9	0.00	0.00	0.00	G9	0.0	0.0	0.0
G10	0.04	0.05	0.05	G10	0.7	1.7	0.9
G11	0.04	0.06	0.03	G11	0.3	1.6	0.3
G12	0.03	0.08	0.02	G12	0.1	0.8	1.1
G13	0.02	0.10	0.01	G13	1.2	1.1	1.0
G14	0.02	0.07	0.00	G14	0.1	0.4	0.1
G15	0.03	0.03	0.01	G15	0.4	0.6	1.6

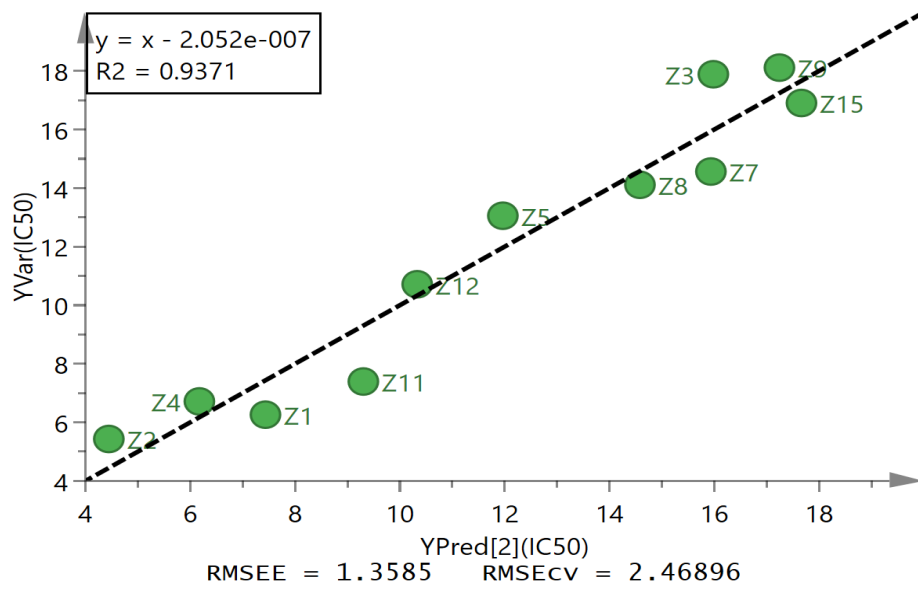


**Fig. S2.** Coefficients plot of Fructus Forsythiae seed

**Table S3.** RSD of the two corresponding fingerprint peaks area

Peak area of Forsythiaside				Peak area of Phillyrin			
Para.	Precision	Repeatability	Stability	Para.	Precision	Repeatability	Stability
1	2159.3	2174.0	2112.2	1	3429.8	3387.0	3355.7
2	2097.4	2181.0	2128.5	2	3329.8	3493.7	3384.0
3	2133.2	2285.3	2201.7	3	3388.2	3469.4	3368.9
4	2214.7	2298.4	2141.2	4	3515.7	3318.7	3399.7
5	2239.9	2178.0	2276.6	5	3553.6	3596.6	3525.4
6	2266.4	2214.6	2218.8	6	3593.9	3429.5	3607.1
RSD(%)	3.00	2.53	2.91	RSD(%)	2.95	2.76	2.97

Notes: The above repeatability peak area is the average value of double needles



**Fig. S3.** Y observed versus Y predicted plot for the calibration model of seeds.



**Table S4.** The evaluation parameters ( $S_m$ ,  $P_m$ ,  $\alpha$ ) of the fusion fingerprint

Forsythia forsythia				Forsythia forsythia seed			
Para.	$S_m$	$P_m$	$\alpha$	Para.	$S_m$	$P_m$	$\alpha$
S1	0.972	113.800	0.027	Z1	117.1	0.011	0.977
S2	0.892	50.000	0.223	Z2	135.6	0.08	0.965
S3	0.980	119.300	0.061	Z3	24.8	0.023	0.859
S4	0.737	10.300	0.017	Z4	105.3	0.003	0.966
S5	0.969	93.500	0.070	Z5	49.2	0.27	0.942
S6	0.881	40.400	0.372	Z6	23.6	0.286	0.886
S7	0.981	74.900	0.035	Z7	28.2	0.167	0.901
S8	0.840	12.800	0.227	Z8	31.6	0.07	0.897
S9	0.885	46.200	0.112	Z9	53.1	0.349	0.907
S10	0.842	24.900	0.104	Z10	44.6	0.327	0.907
S11	0.986	113.600	0.007	Z11	80.4	0.012	0.983
S12	0.781	27.900	0.316	Z12	116.1	0.01	0.973
S13	0.977	100.400	0.049	Z13	108.7	0.011	0.969
S14	0.866	27.900	0.240	Z14	30.3	0.043	0.899
S15	0.982	123.600	0.051	Z15	80.6	0.15	0.933
S16	0.966	109.900	0.045				
S17	0.801	20.900	0.175				