Supporting Information

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Phenolic Compounds of *Pinus brutia* Ten.: Chemical Investigation and Quantitative Analysis Using an Ultra-Performance Liquid Chromatography Tandem Mass Spectrometry with Electrospray Ionization Source

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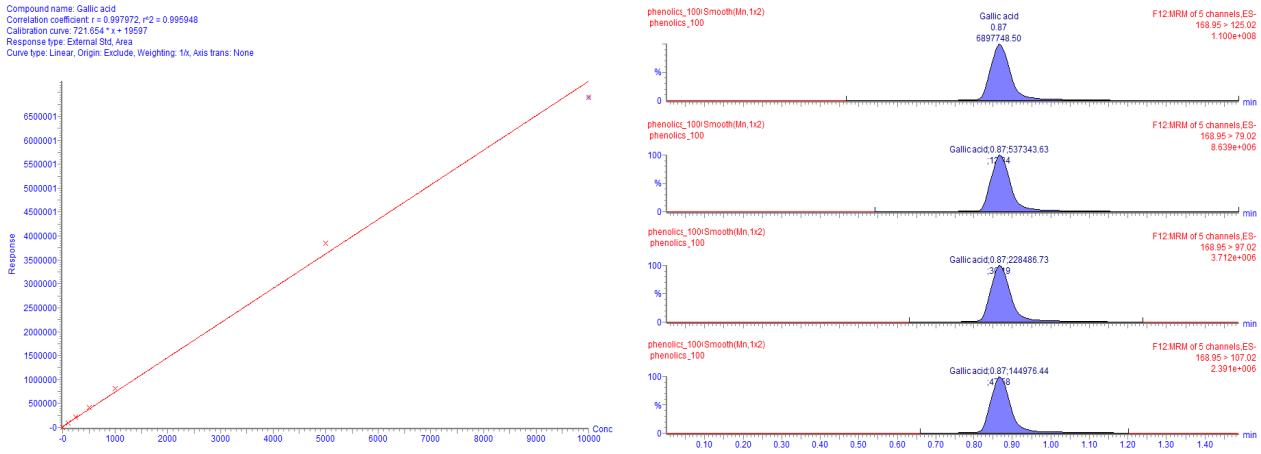
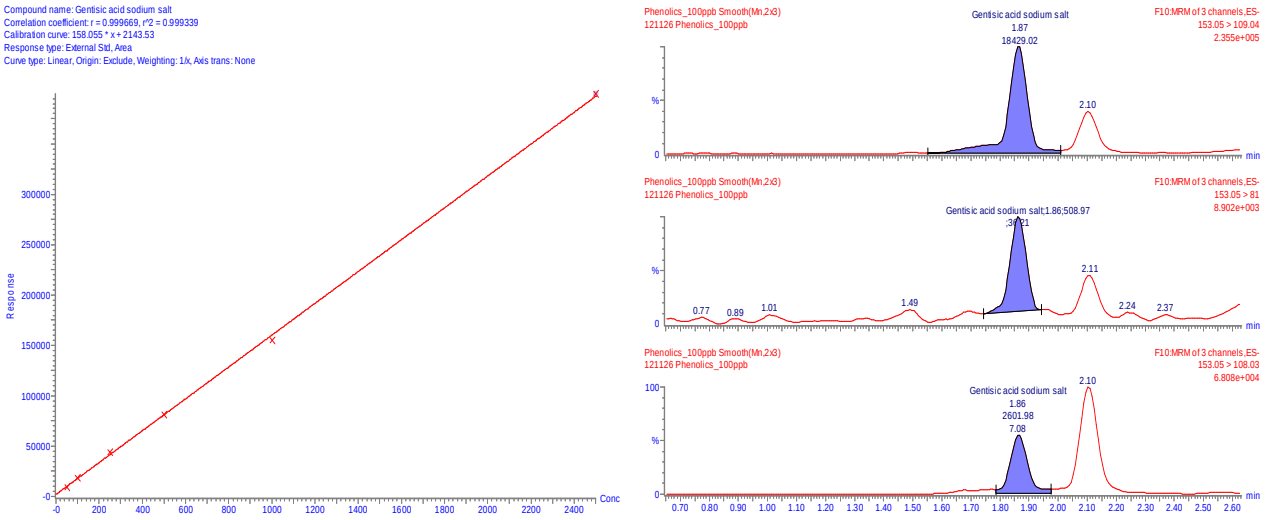
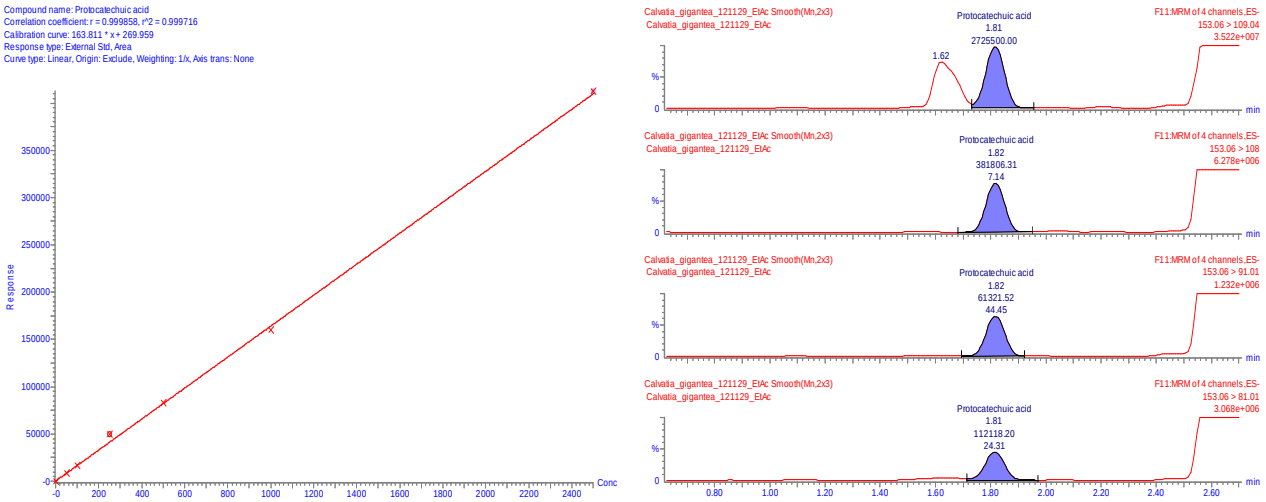


S1: Calibration Curve and UPLC-MS/MS Chromatogram of Gallic acid



S2: Calibration Curve and UPLC-MS/MS Chromatogram of Gentisic acid



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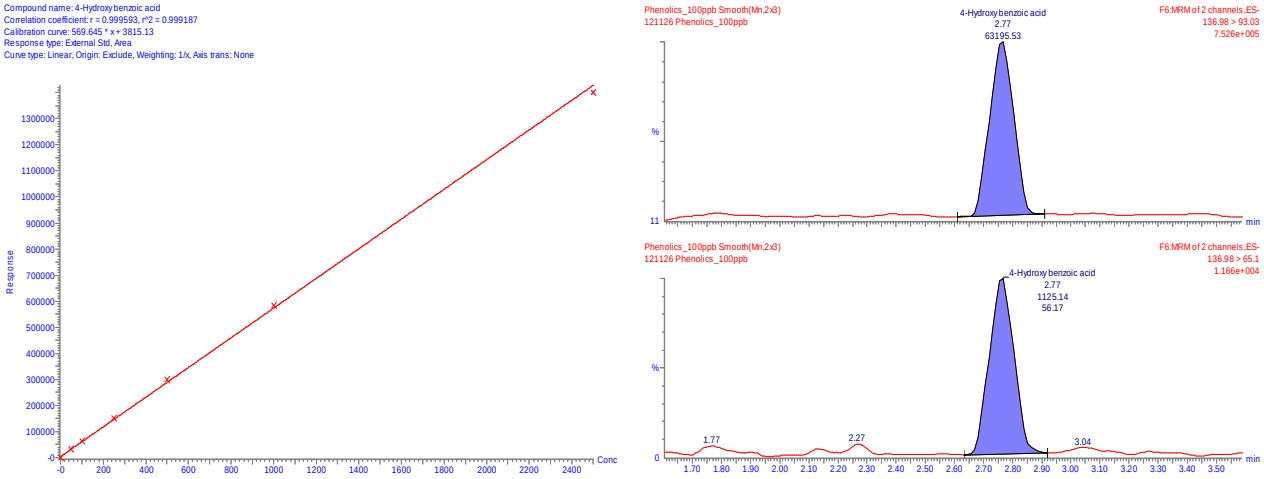
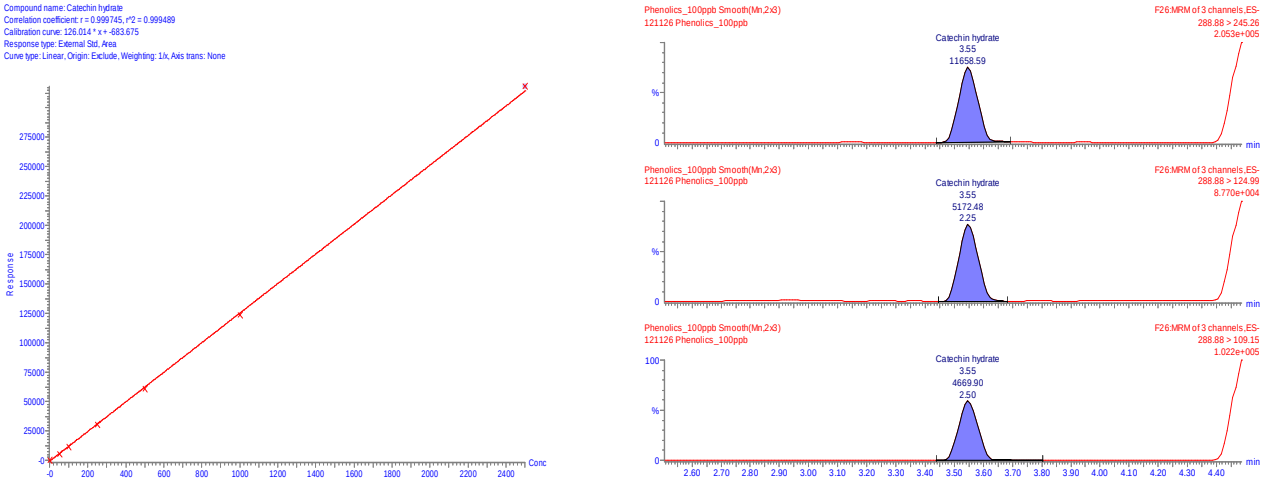
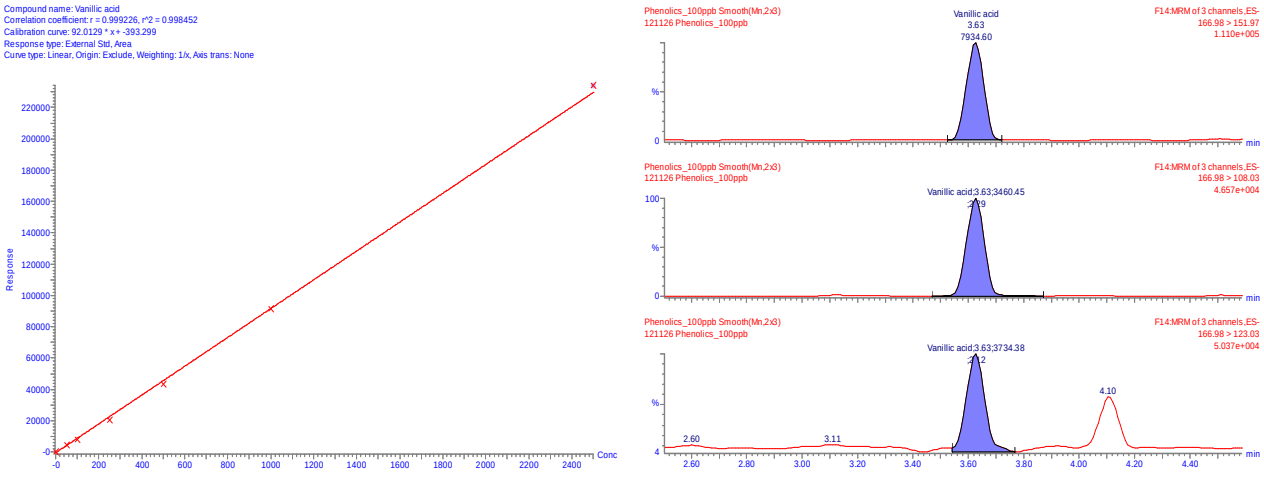


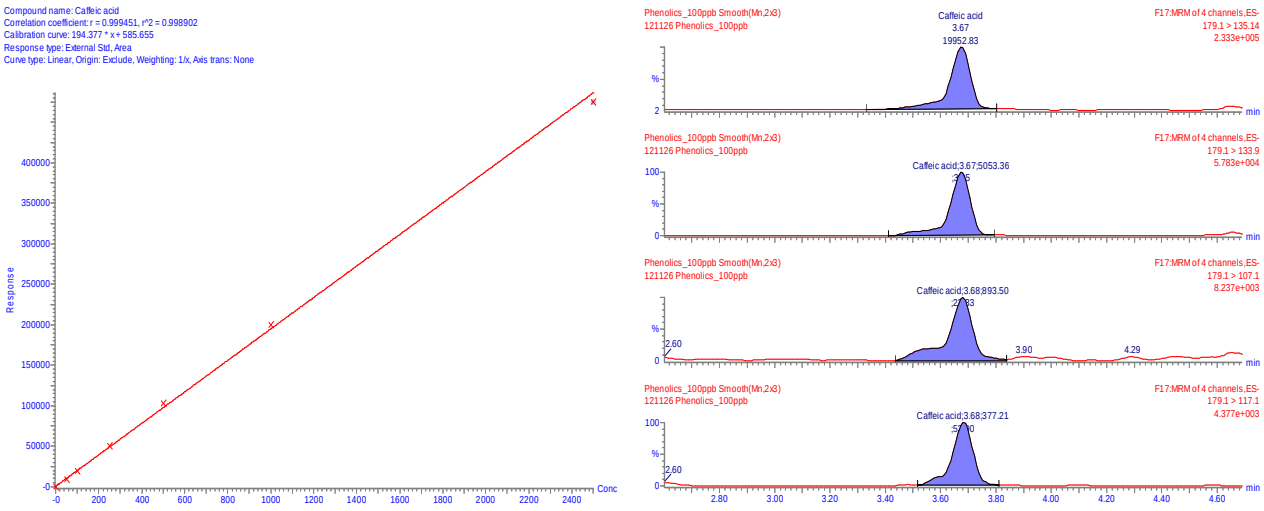
S4: Calibration Curve and UPLC-MS/MS Chromatogram of 4-hydroxy benzoic acid



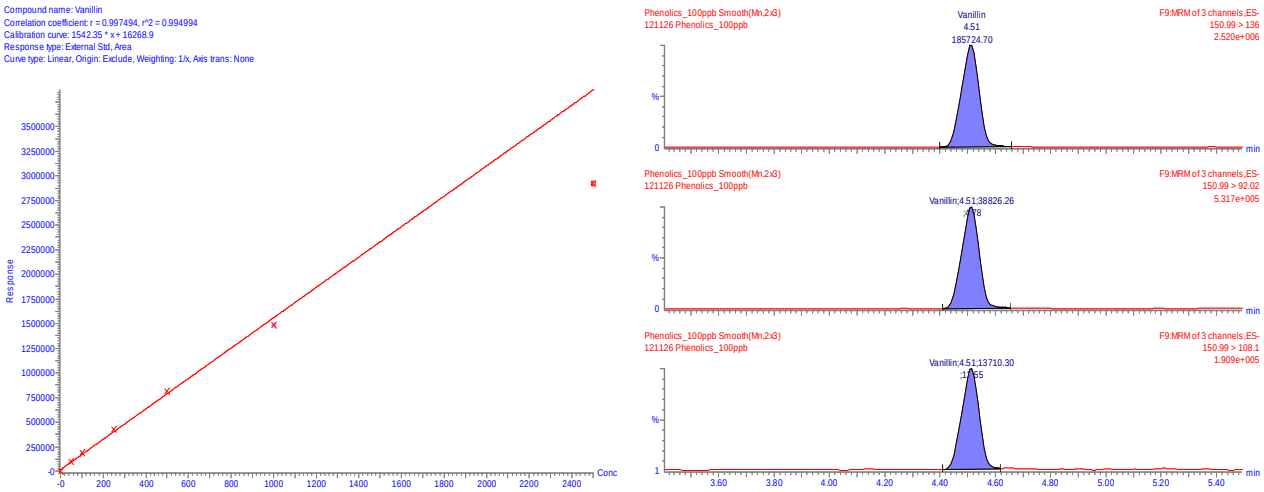
S5: Calibration Curve and UPLC-MS/MS Chromatogram of Catechin hydrate



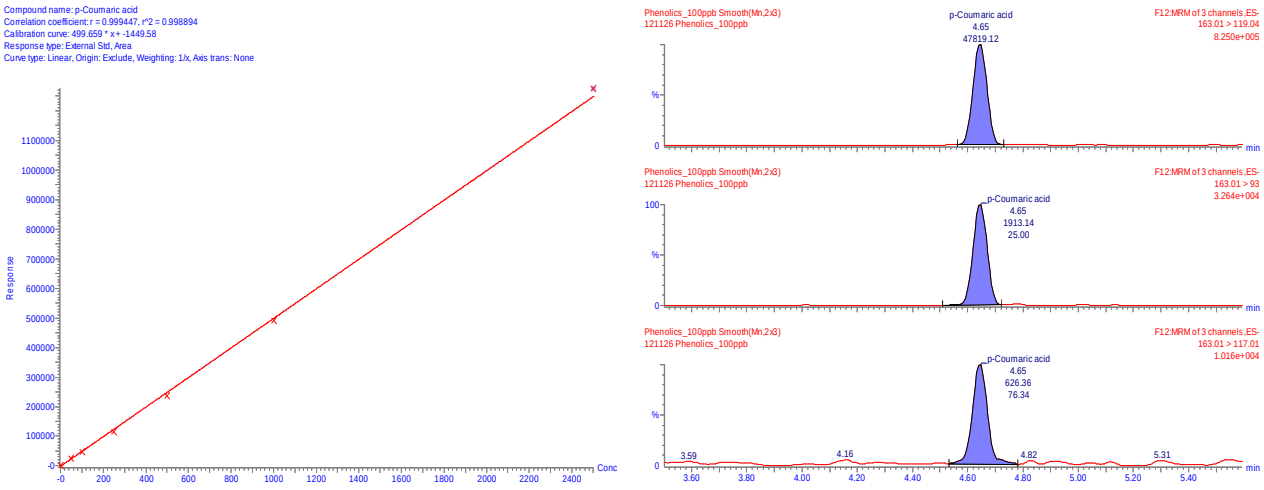
S6: Calibration Curve and UPLC-MS/MS Chromatogram of Vanillic acid



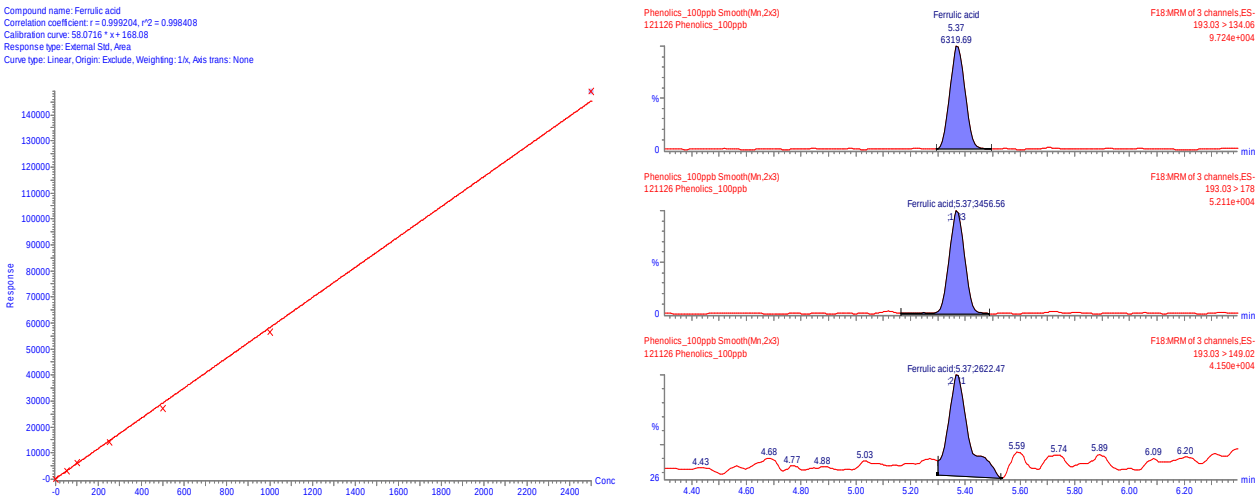
S7: Calibration Curve and UPLC-MS/MS Chromatogram of Caffeic acid



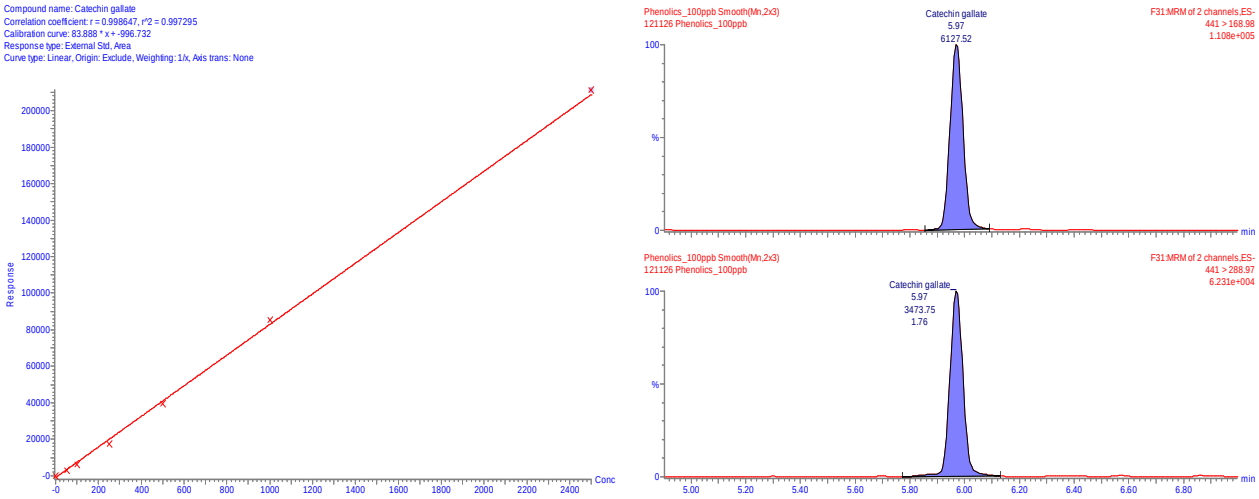
S8: Calibration Curve and UPLC-MS/MS Chromatogram of Vanillin



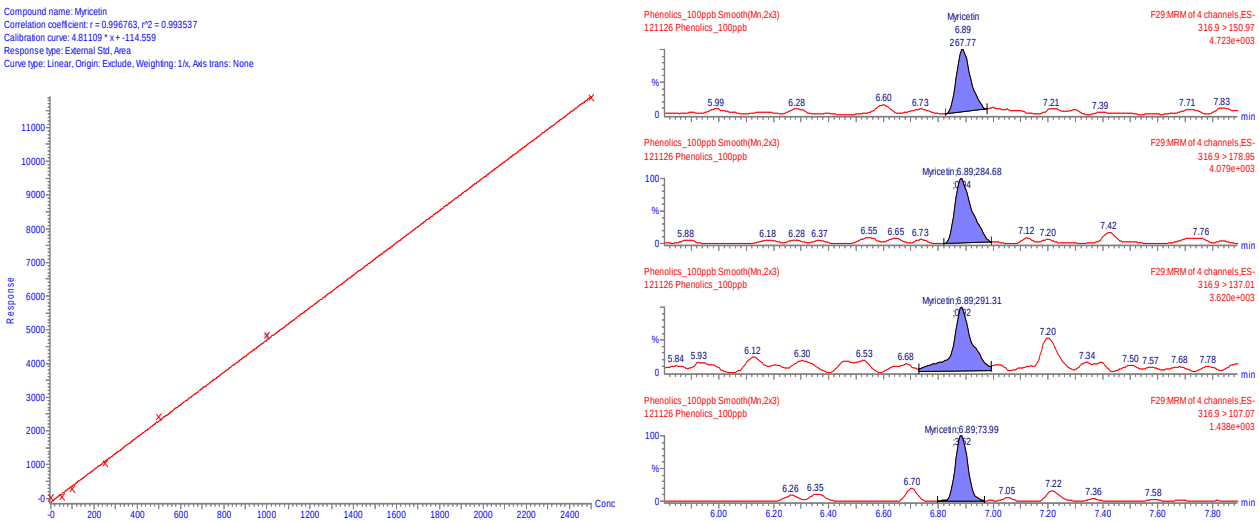
S9: Calibration Curve and UPLC-MS/MS Chromatogram of *p*-Coumaric acid



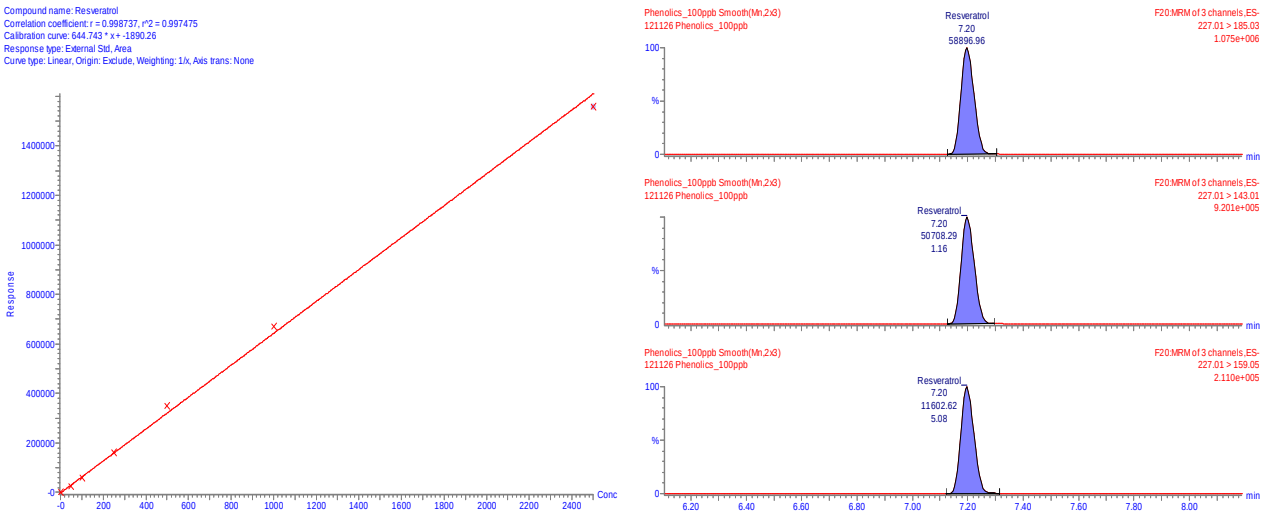
S10: Calibration Curve and UPLC-MS/MS Chromatogram of Ferulic acid



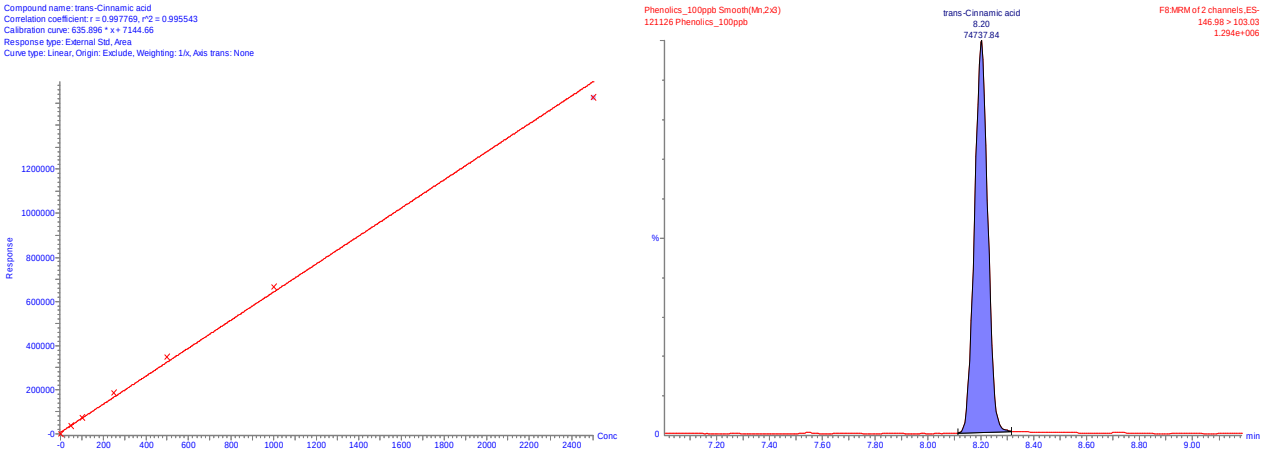
S11: Calibration Curve and UPLC-MS/MS Chromatogram of Catechin gallate



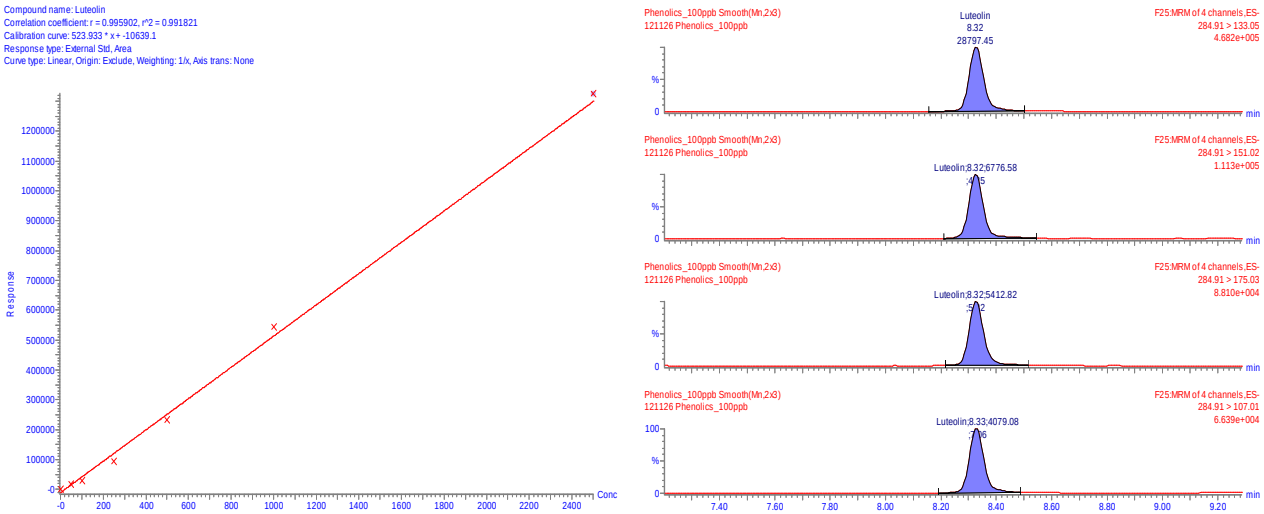
S12: Calibration Curve and UPLC-MS/MS Chromatogram of Myricetin



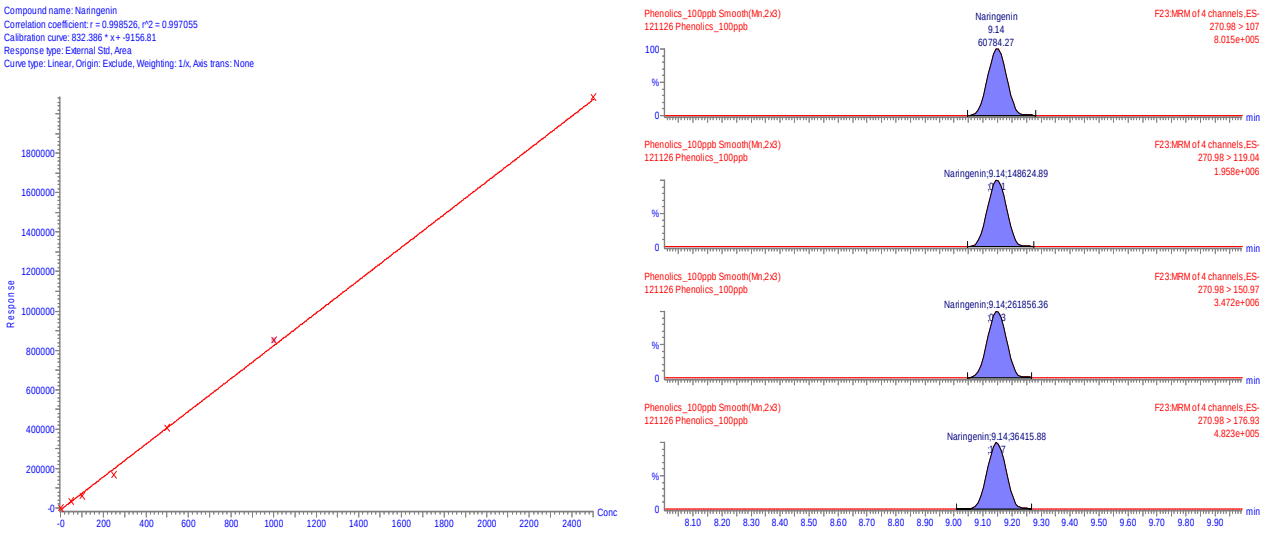
S13: Calibration Curve and UPLC-MS/MS Chromatogram of Resveratrol



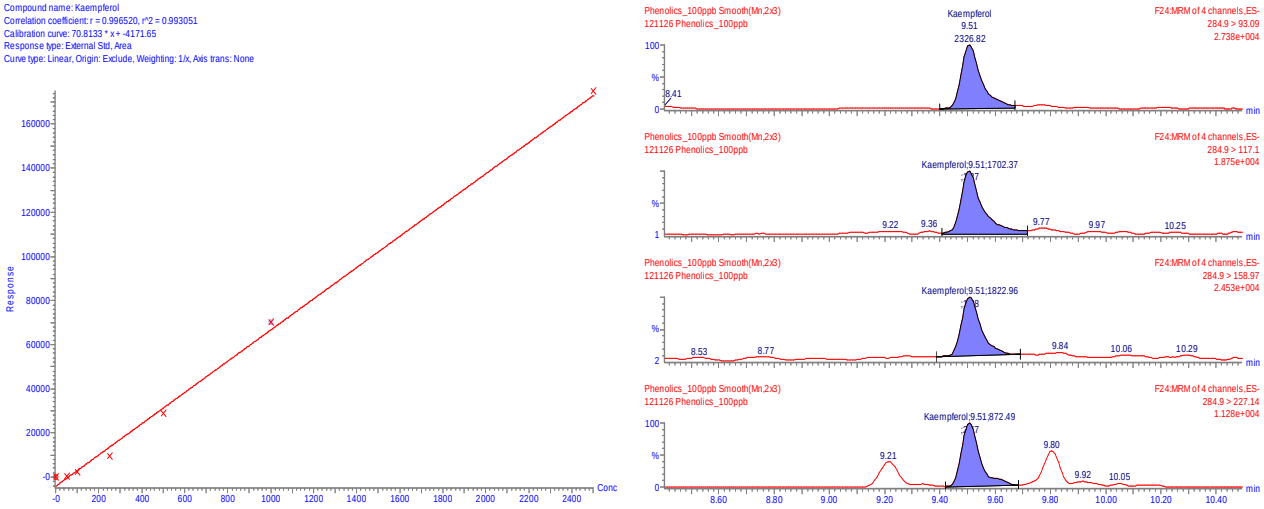
S14: Calibration Curve and UPLC-MS/MS Chromatogram of *trans*-Cinnamic acid



S15: Calibration Curve and UPLC-MS/MS Chromatogram of Luteolin



S16: Calibration Curve and UPLC-MS/MS Chromatogram of Naringenin



S17: Calibration Curve and UPLC-MS/MS Chromatogram of Kaempferol

S18. Analytical Parameters of the Method

Compound	**LOD (mg 100 mL^{-1})**	**LOQ (mg 100 mL^{-1})**	**CV%[a]**	**CV%[b]**	**Recovery (%)[b]**	**Stability CV%[c]**	**Accuracy (%)[d]**	**Calibration equations**	**r^2**
4-hydroxy benzoic acid	0.009	0.015	0.003	0.036	85.7-99.6	0.95	95.1-97.6	y=518.823x+12509.1	0.998011
trans-Cinnamic acid	0.003	0.005	0.001	0.011	94.4-98.0	0.43	97.7-100.5	y=697.454x+265.934	0.996617
Resveratrol	0.006	0.010	0.002	0.044	85.5-108.7	1.55	97.1-99.8	y=575.926x+3765.28	0.994946
Catechin gallate	0.018	0.030	0.006	0.096	96.1-100.0	1.04	85.4-98.7	y=115.859x-4152.47	0.993454
Homogentisic acid	0.015	0.025	0.005	0.075	90.2-93.7	1.29	95.1-98.8	y=4.05441x-3.93614	0.995159
Gentisic acid	0.036	0.060	0.012	0.144	98.9-99.9	1.18	98.2-99.9	y=112.964x+4366.91	0.994179
Vanillin	0.021	0.035	0.007	0.091	91.3-94.9	1.17	97.1-99.2	y=1209.68x+17245.9	0.998989
Vanillic acid	0.012	0.020	0.004	0.048	97.9-99.9	1.01	89.6-95.9	y=137.65x+3637.2	0.991877
Catechin hydrate	0.054	0.090	0.018	0.198	98.3-101.7	0.72	97.6-101.5	y=87.4061x+73404.39	0.994509
Chlorogenic acid	0.042	0.070	0.014	0.168	91.5-93.4	1.18	99.1-100.8	y=824.963x+4666.09	0.996764
p-Coumaric acid	0.033	0.055	0.011	0.132	88.0-100.1	0.86	99.1-100.6	y=580.683x-7946.1	0.996035
Ferulic acid	0.030	0.050	0.010	0.150	87.4-96.8	0.65	94.1-99.9	y=86.9682x-3700.24	0.992075
Hesperetin	0.039	0.065	0.013	0.156	90.0-94.1	1.08	96.1-99.9	y=1589.82x-5719.26	0.999487
Chrysin	0.051	0.085	0.017	0.204	98.7-100.5	0.79	95.2-100.6	y=575.5x-12727.6	0.995314
Protocatechuic acid	0.027	0.045	0.009	0.171	99.1-100.9	0.57	90.0-99.7	y=137.052x+1154.01	0.996650
trans-2-hydroxy cinnamic acid	0.063	0.105	0.021	0.252	98.1-99.9	1.27	92.1-100.8	y=417.594x-5112.34	0.998600
Gallic acid	0.048	0.080	0.016	0.192	98.6-100.8	0.49	95.4-99.7	y=721.654x+19597	0.997972

Compound	LOD (mg 100 mL^{-1})	LOQ (mg 100 mL^{-1})	CV%[a]	CV%[b]	Recovery (%)[b]	Stability CV%[c]	Accuracy (%)[d]	Calibration equations	r^2
Myricetin	0.015	0.025	0.005	0.160	94.5-101.6	1.22	98.1-100.5	y=4.39568x-73.9242	0.994971
Naringenin	0.009	0.015	0.003	0.066	96.1-99.6	0.62	96.1-100.2	y=764.46x-3158.63	0.996254
Caffeic acid	0.054	0.090	0.018	0.216	89.9-99.1	1.03	98.1-100.2	y=133.554x+3121.08	0.993104
Pyrogallol	0.069	0.115	0.023	0.276	99.7-100.2	0.62	90.8-98.1	y=16.6558x-1173.34	0.990920
Luteolin	0.006	0.010	0.002	0.064	95.4-98.7	0.99	99.2-100.5	y=606.354x-17970.6	0.997617
Kaempferol	0.006	0.010	0.002	0.084	94.1-96.9	0.45	95.7-100.1	y=82.2591x-3446.02	0.990922

[a] Intra-day repeatability.
[b] Inter-day reproducibility and recovery from once a day of three consecutive days.
[c] Stability were measured by standard solutions over three consecutive days.
[d] Accuracy represents the ratio of the measured concentration to the theoretical concentration from medium concentration value of the calibration range.