Supplementary Information

Optimizing Ultrasound-Assisted Deep Eutectic Solvent Extraction of Bioactive Compounds from Chinese Wild Rice

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Table S1

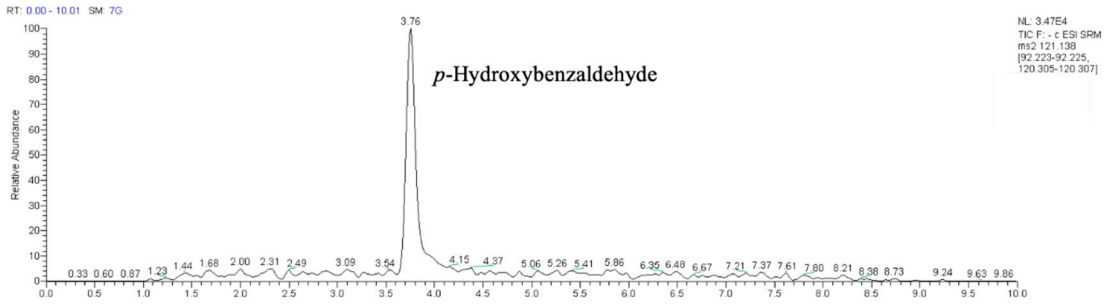
Parameters of linear regression, concentration rang, LOD and LOQ of the analyzed standards.

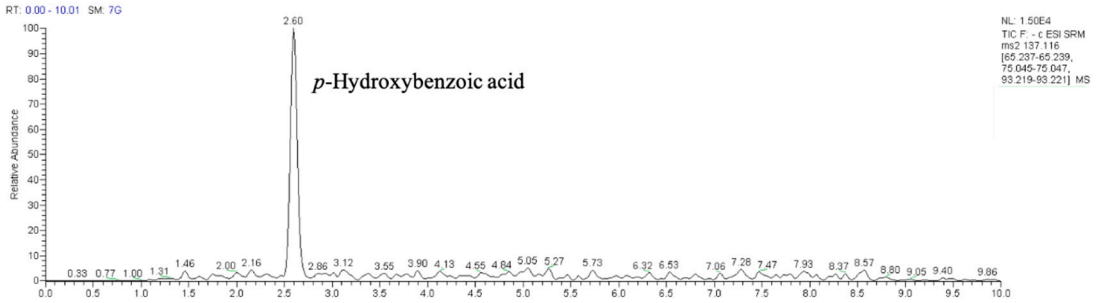
standards	Regression equation	Concentration rang (μg/g)	R^2	LOD (ng/mL)	LOQ (ng/mL)
Vanillin	y = 330396x + 58002.6	0.30–30	0.9972	7.073	23.278
p-Hydroxybenzaldehyde	y = 37875x + 10863.4	0.2–20	0.9992	1.493	6.563
p-Hydroxybenzoic acid	y = 195770x + 3998.1	0.2–20	0.9993	6.374	22.570
p-Coumaric acid	y = 627355x + 29881.7	0.05–5	0.9995	3.547	13.621
Protocatechuic acid	y = 32574x + 424.713	0.2-20	0.9998	1.348	5.704
Syringic acid	y = 16972x + 12950.9	0.02-10	0.9989	7.469	25.581
Ferulic acid	y = 18581.6x – 40196.1	0.5-120	0.9944	3.241	10.834
Sinapic acid	y = 222815x + 65084	0.5-120	0.9995	4.684	15.302
Vanillic acid	y = 341171x – 73698.3	0.2-20	0.9921	7.561	16.320
Catechin	y = 39552.9x – 23122.9	0.5-25	0.9998	9.747	30.422
Procyanidin B1	y = 29832.4x – 16919.9	0.5-20	0.9985	4.360	14.071
Quercetin	y = 235670x – 42503	0.5-20	0.9924	0.479	2.690

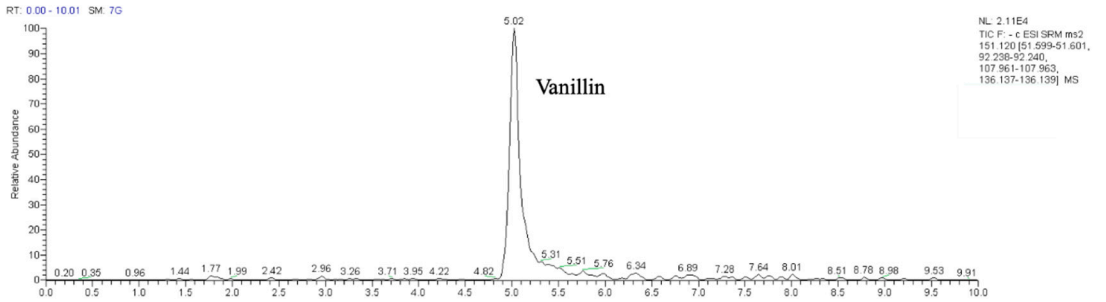
The Regression equation was constructed by plotting the peak area versus the concentration of each standard. LOD, limits of detection. LOQ, limits of quantification.

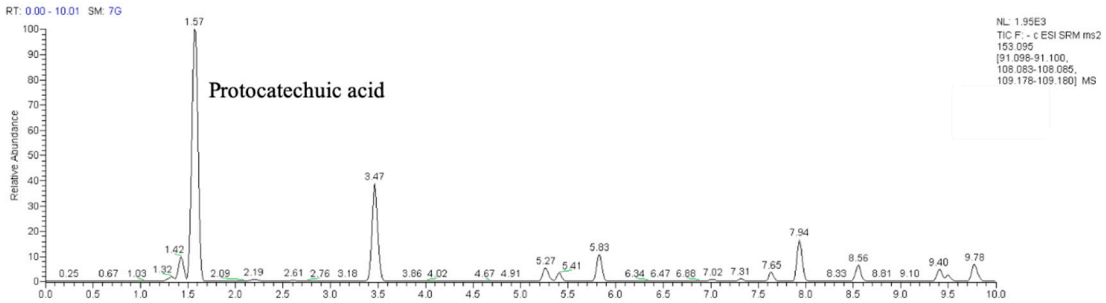
Fig. S1

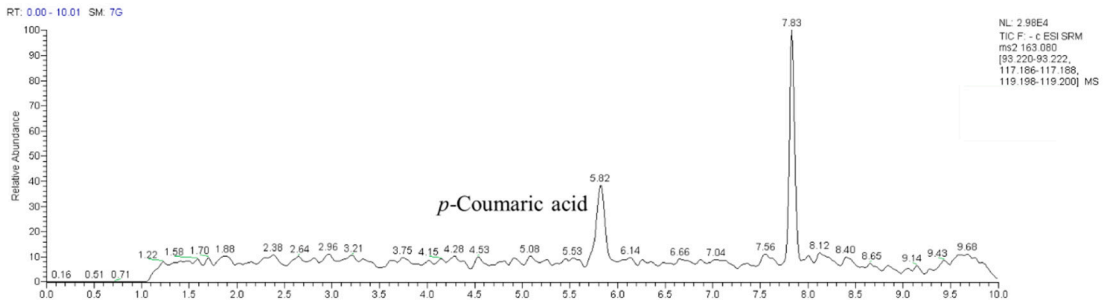
The UPLC-MS/MS TIC spectrum of the standards.

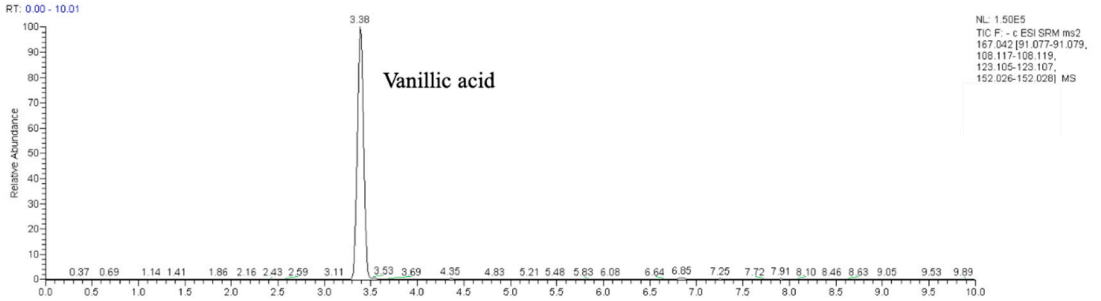

RT: 0.00 - 10.01 SM: 7G
Relative Abundance
3.76
p-Hydroxybenzaldehyde
NL: 3.47E4
TIC F: - c ESI SRM
ms2 121.138
[92.223-92.225,
120.305-120.307]

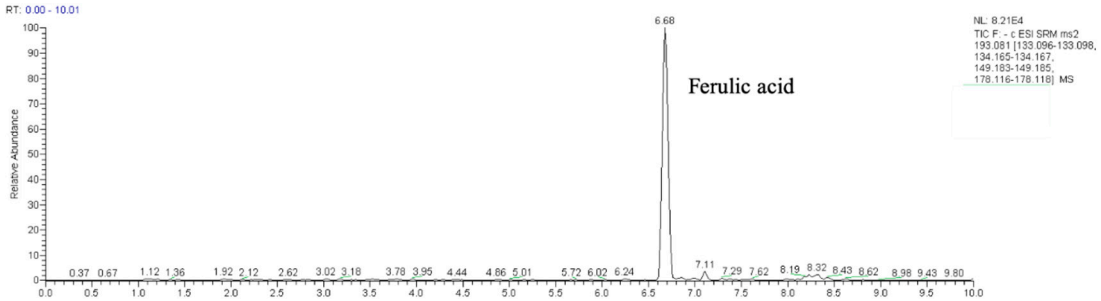

RT: 0.00 - 10.01 SM: 7G
Relative Abundance
2.60
p-Hydroxybenzoic acid
NL: 1.50E4
TIC F: - c ESI SRM
ms2 137.116
[65.237-65.239,
75.045-75.047,
93.219-93.221] MS

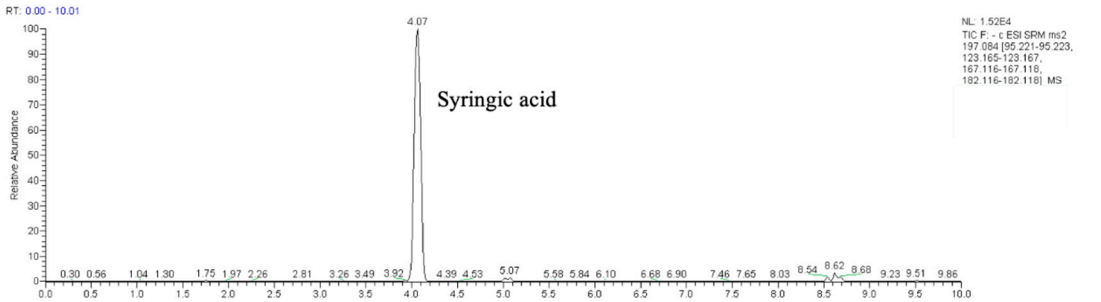

RT: 0.00 - 10.01 SM: 7G
Relative Abundance
5.02
Vanillin
NL: 2.11E4
TIC F: - c ESI SRM ms2
151.120 [51.599-51.601,
92.238-92.240,
107.961-107.963,
136.137-136.139] MS

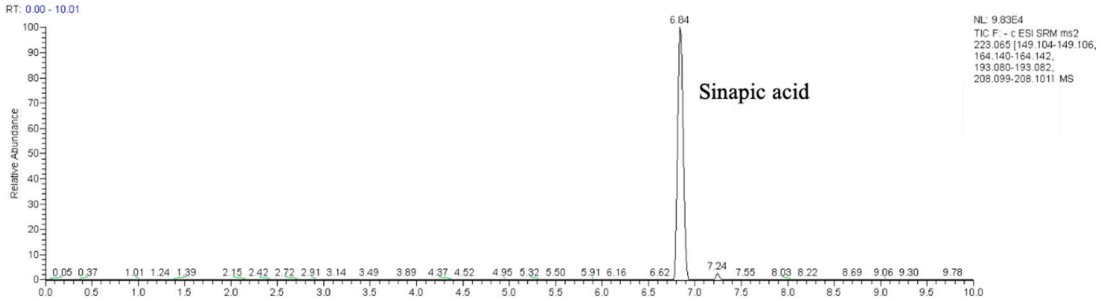

RT: 0.00 - 10.01 SM: 7G
Relative Abundance
1.57
Protocatechuic acid
3.47
NL: 1.95E3
TIC F: - c ESI SRM ms2
153.095
[91.098-91.100,
108.083-108.085,
109.178-109.180] MS

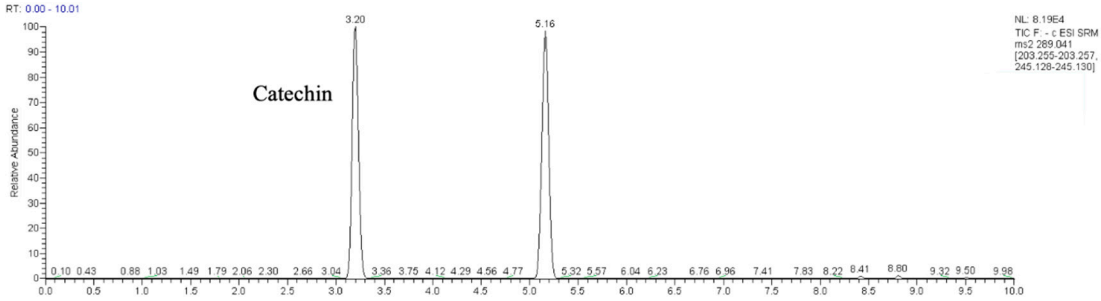

RT: 0.00 - 10.01 SM: 7G
Relative Abundance
7.83
5.82
p-Coumaric acid
NL: 2.98E4
TIC F: - c ESI SRM
ms2 163.080
[93.220-93.222,
117.186-117.188,
119.198-119.200] MS


RT: 0.00 - 10.01
Vanillic acid
3.38
NL: 1.50E5
TIC F: - c ESI SRM ms2
167.042 [91.077-91.079,
108.117-108.119,
123.105-123.107,
152.026-152.028] MS
Relative Abundance


RT: 0.00 - 10.01
Ferulic acid
6.68
NL: 8.21E4
TIC F: - c ESI SRM ms2
193.081 [133.096-133.098,
134.165-134.167,
149.183-149.185,
178.116-178.118] MS
Relative Abundance


RT: 0.00 - 10.01
Syringic acid
4.07
NL: 1.52E4
TIC F: - c ESI SRM ms2
197.084 [95.221-95.223,
123.165-123.167,
167.116-167.118,
182.116-182.118] MS
Relative Abundance


RT: 0.00 - 10.01
Sinapic acid
6.84
NL: 9.83E4
TIC F: - c ESI SRM ms2
223.065 [149.104-149.106,
164.140-164.142,
193.080-193.082,
208.099-208.101] MS
Relative Abundance


RT: 0.00 - 10.01
Catechin
3.20
5.16
NL: 8.19E4
TIC F: - c ESI SRM
ms2 289.041
[203.255-203.257,
245.128-245.130]
Relative Abundance

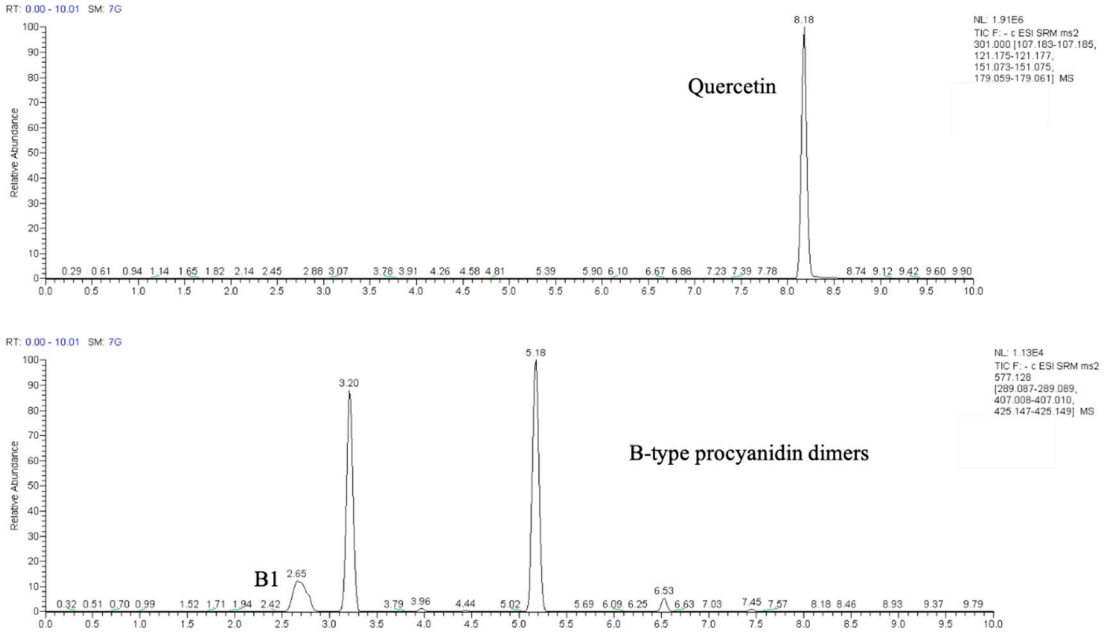
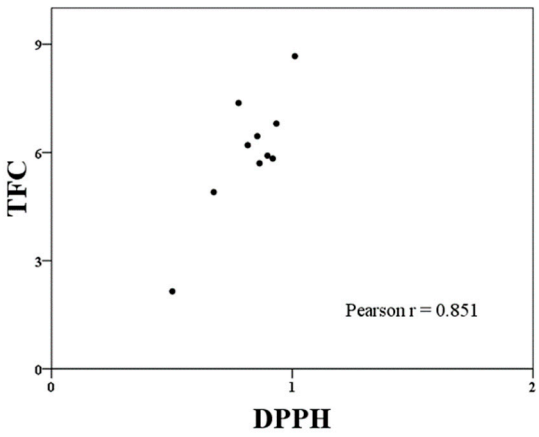


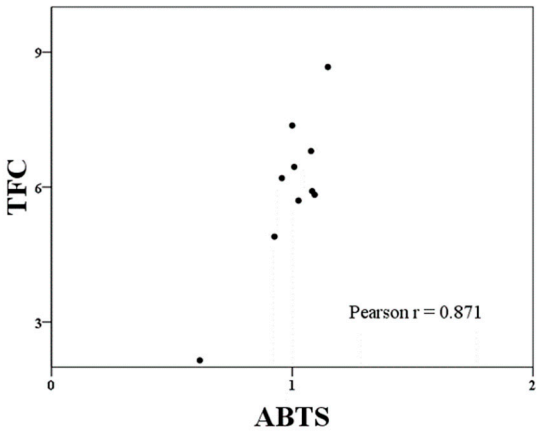
Fig.S2

Correlations between (a) TFC and DPPH assay results, (b) TFC and ABTS assay results.

(a)



(b)


TFC
9
6
3
0
1
2
ABTS
Pearson r = 0.871