Supplementary Information

Table S-1 Gradient elution program applied for UHPLC-MS analysis for ES– modes.

Time(min)	Flow rate (ml/min^{-1})	Mobile phase A(%)	Mobile phase B(%)	Curve
Initial	0.4	100%	0%	6
2	0.4	100%	0%	6
17	0.4	0%	100%	6
22	0.4	0%	100%	6
24	0.4	100%	0%	6
28	0.4	100%	0%	6

Table S-2 The repeatability and stability data of the proposed method

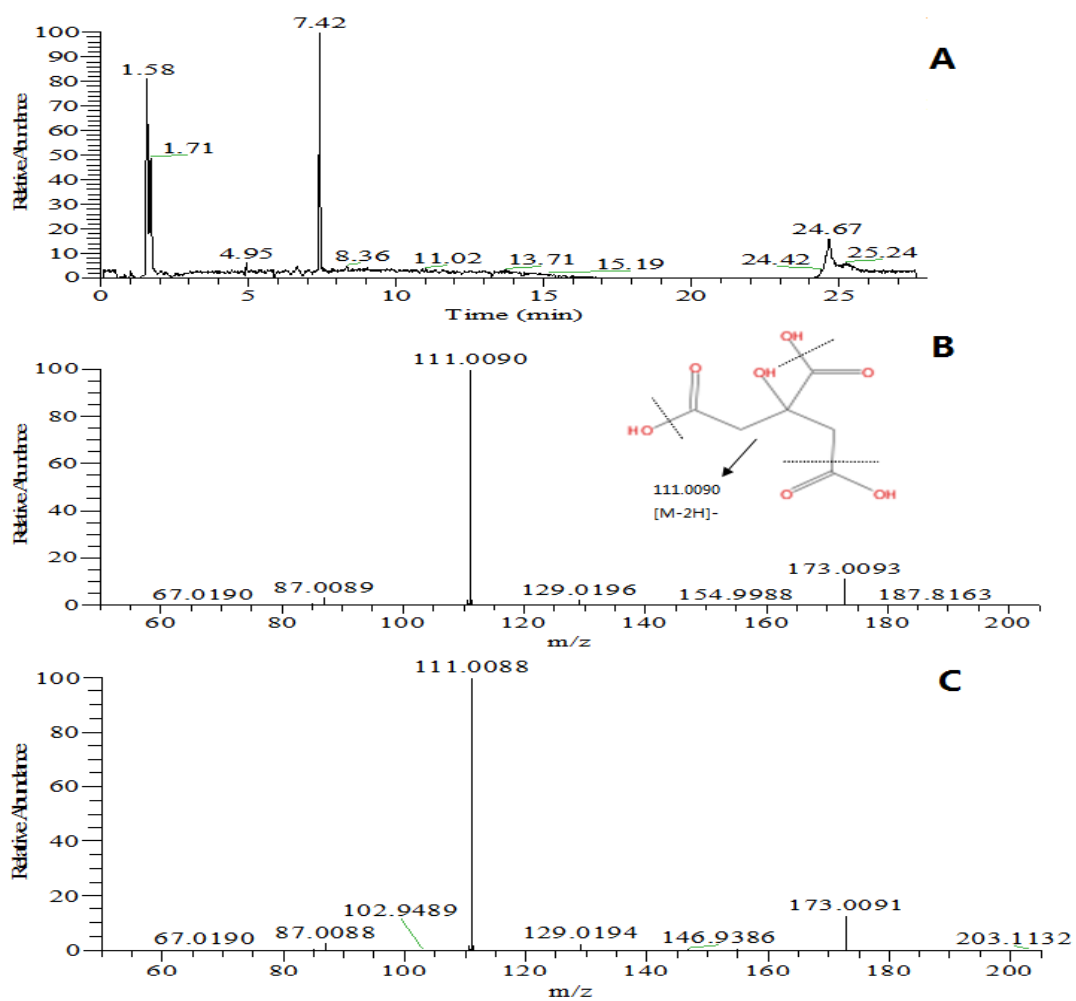| Mode	Selected m/z	Rt (min) Mean	RSD%	Peak area Mean	RSD%
	215.0330	0.73	1.06%	55785708.80	4.00%
	191.0196	1.57	1.11%	25806993.84	6.81%
	103.0401	2.43	1.03%	25270094.47	6.40%
	155.0461	4.80	0.99%	9888103.35	8.99%
ES-	203.0824	5.55	1.17%	13539195.92	5.23%
	283.0820	7.06	1.14%	3691408.41	5.22%
	225.1245	9.60	1.27%	22826787.48	7.24%
	407.2802	11.36	1.33%	11078232.75	4.53%
	540.3301	13.54	1.18%	18739822.82	4.34%
	554.3454	14.48	1.09%	7320692.67	6.03%

Figure S1. Identification of a selected marker (m/z 191.02). (A) Extracted ion chromatogram (EIC) of m/z 191.02; (B) MS/MS spectrum of the ion; (C) MS/MS spectrum of a commercial standard critic acid