

## **Molecular species fingerprinting and quantitative analysis of saffron (*Crocus sativus* L.) for quality control by MALDI mass spectrometry.**

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Figure 1S. MALDI MS spectrum of saffron using (A) C<sub>2</sub>H<sub>5</sub>OH,100% (B) CH<sub>3</sub>OH/H<sub>2</sub>O: 50/50 (v/v), (C) CH<sub>3</sub>OH/NH<sub>4</sub>HCO<sub>3</sub>:50/50 (v/v). ★ MALDI matrix

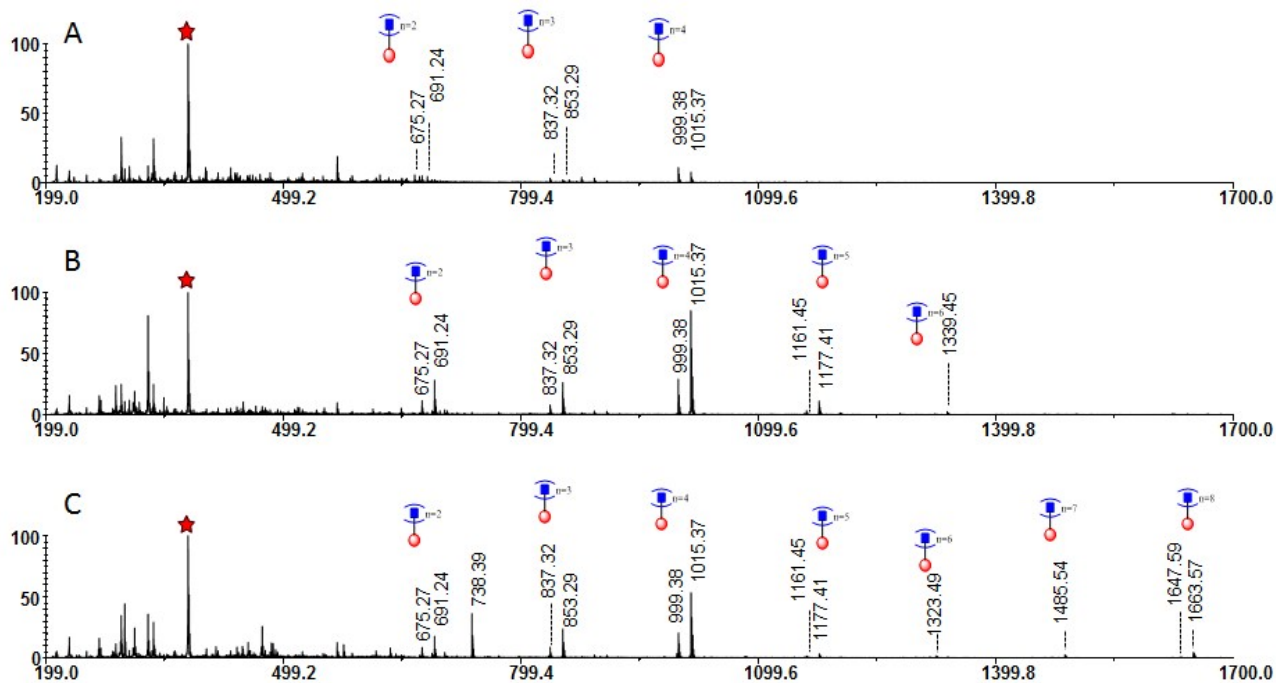


Figure 2S. MS/MS spectrum of (A) Kaempferol 3-sophoroside-7-glucoside ( $[C_{33}H_{41}O_{21}]^+$ ; 773.21,  $\delta$ ppm = 6); (B) Kaempferol 3-sophoroside ( $[C_{27}H_{30}NaO_{16}]^+$ ; 633.15,  $\delta$ ppm = 7)

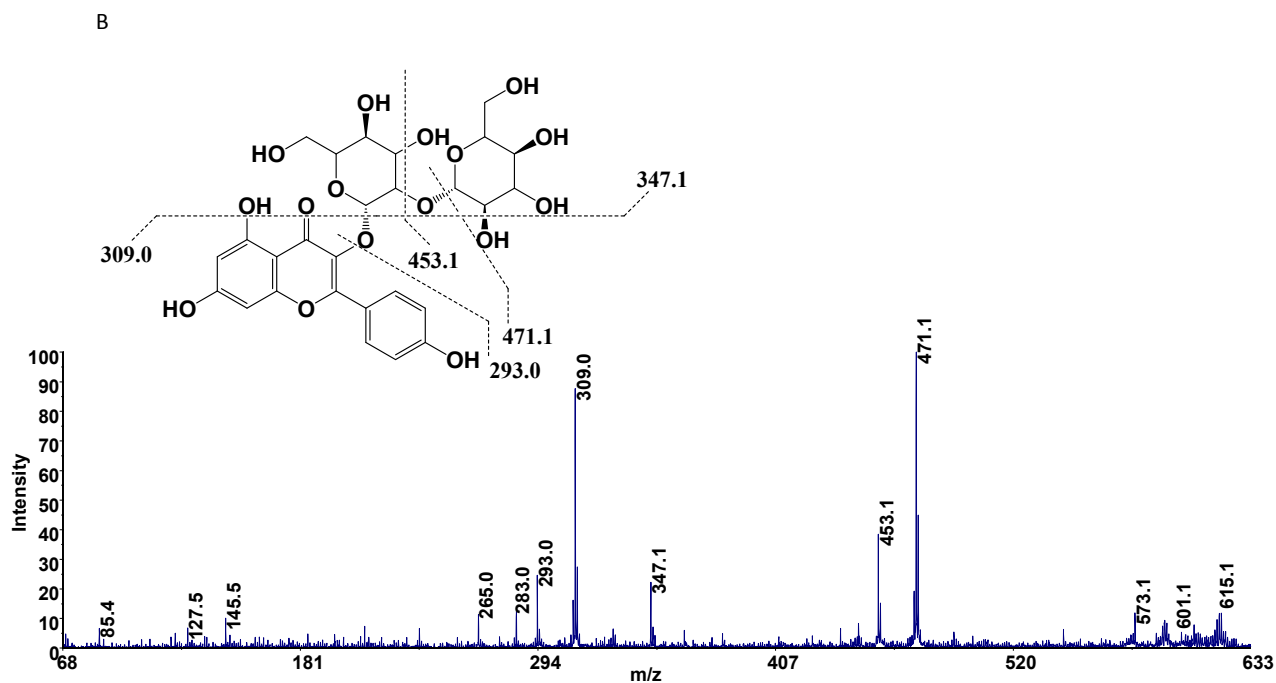
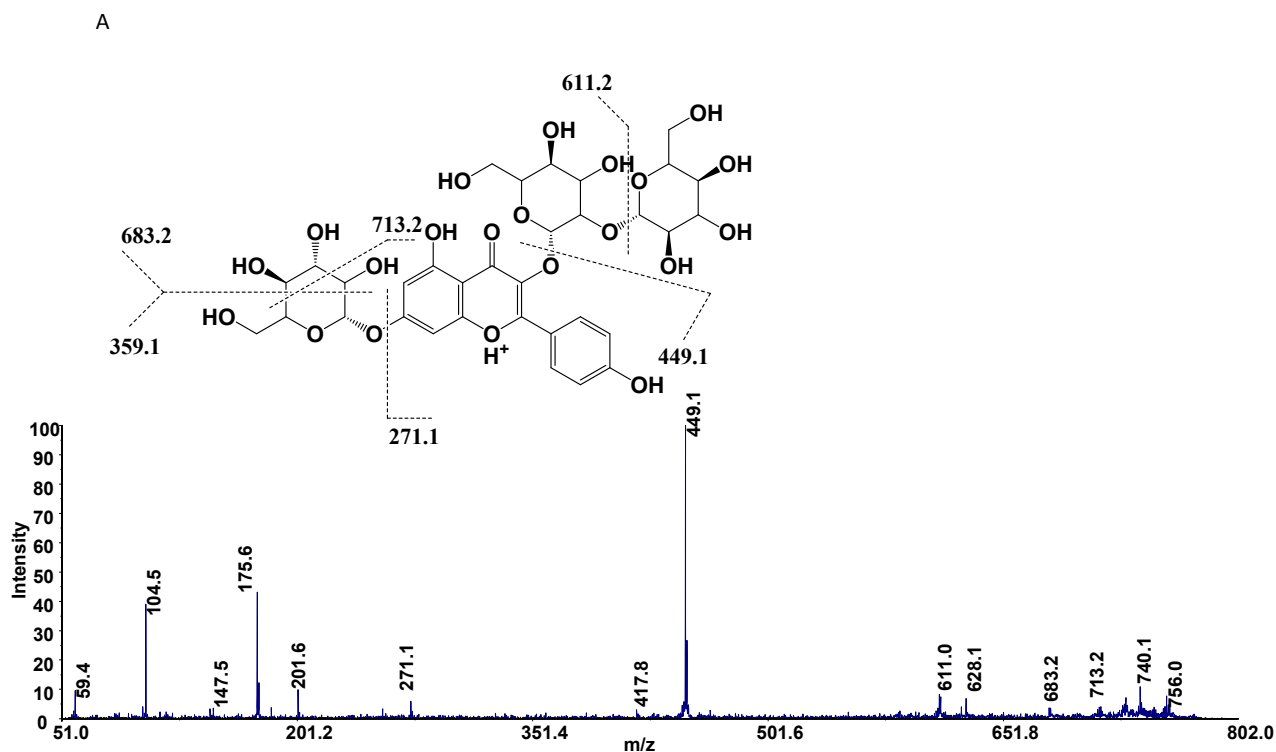


Figure 3S. MS/MS spectrum of (A) quercetin (  $m/z$  303.05 ;  $\delta$ ppm = 7), (B) quercetin 3-*O*-glucoside (  $m/z$  465.10  $\delta$ ppm = 6)

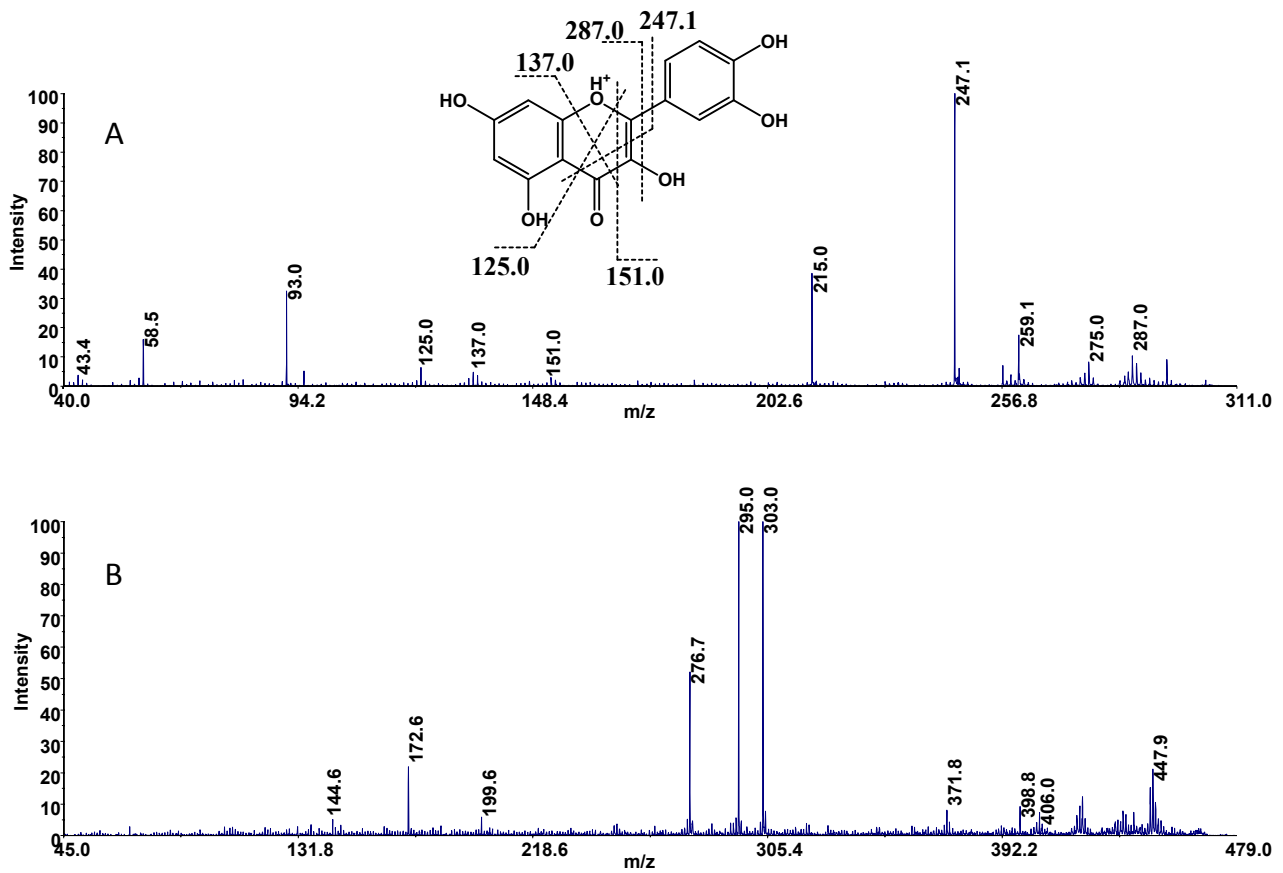


Figure 4S. MALDI spectra of (A) authentic saffron, (B) adulterated sample with turmeric (2%) and (C) turmeric.

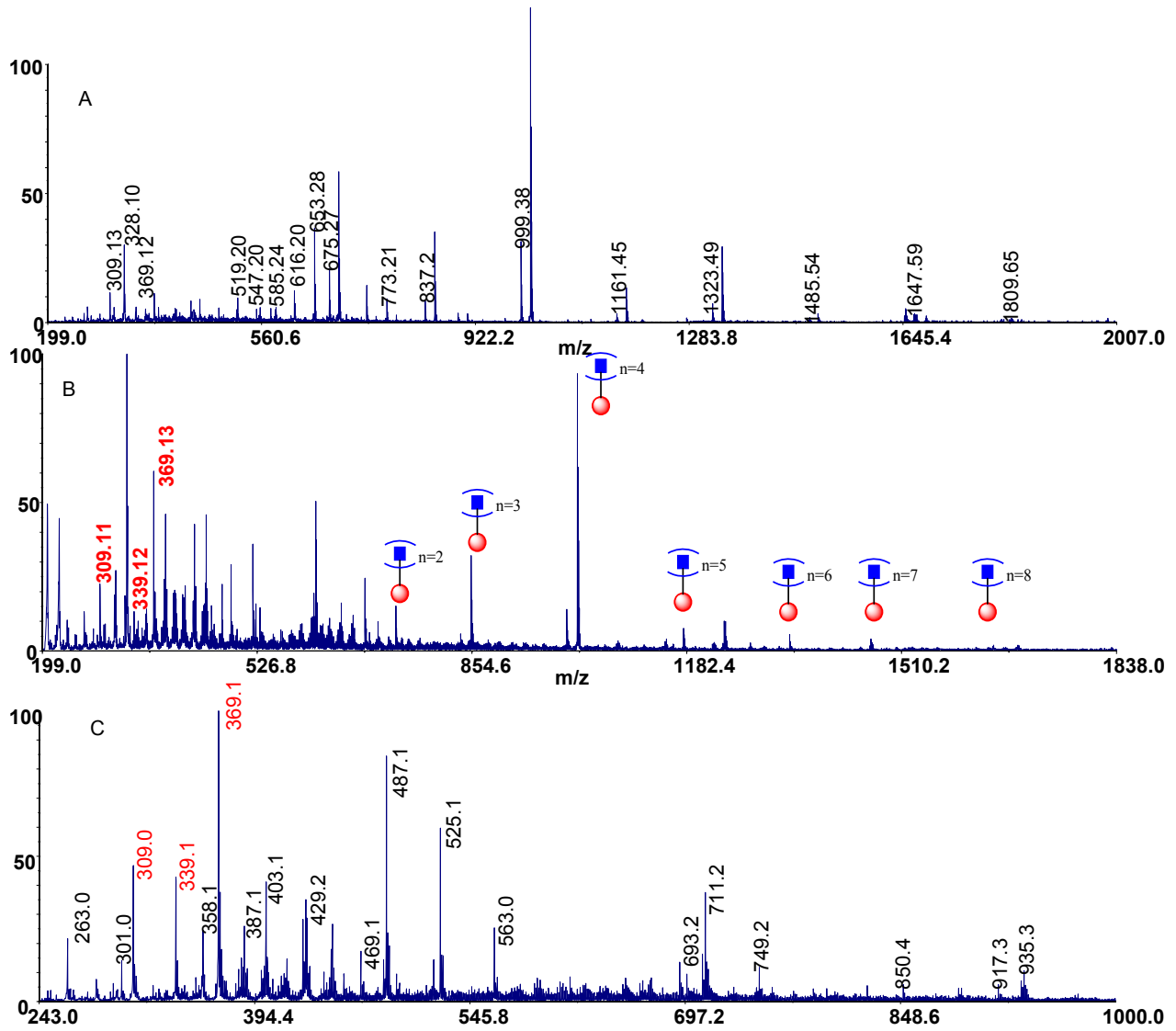
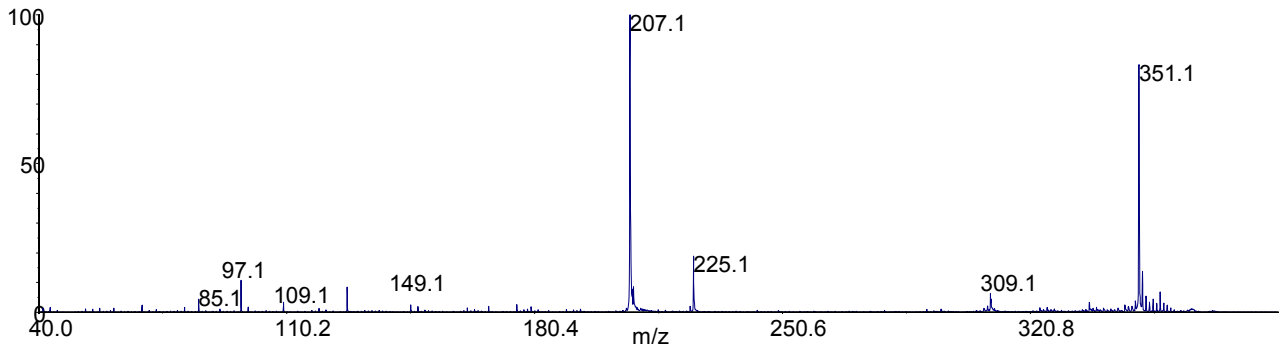


Figure 5S. MALDI MS/MS spectra of (A) picrocrocin and (B) curcumin.

A



B

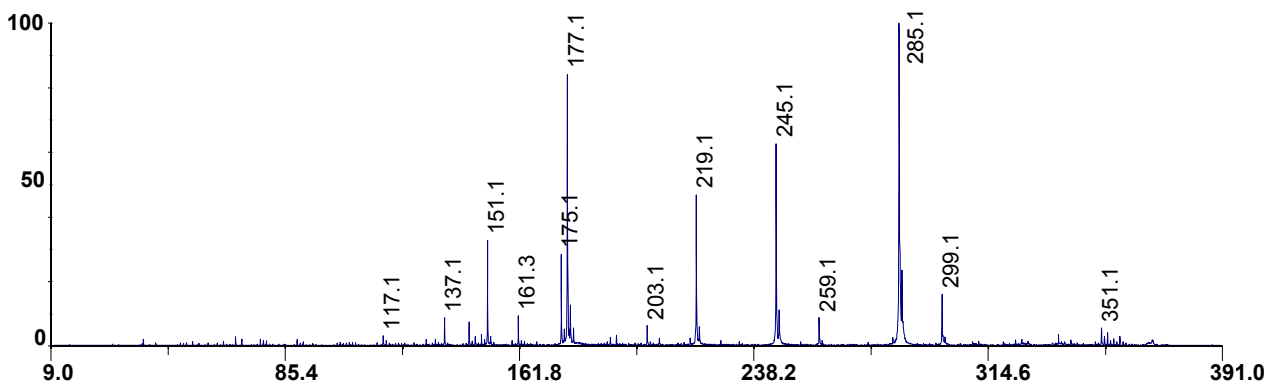
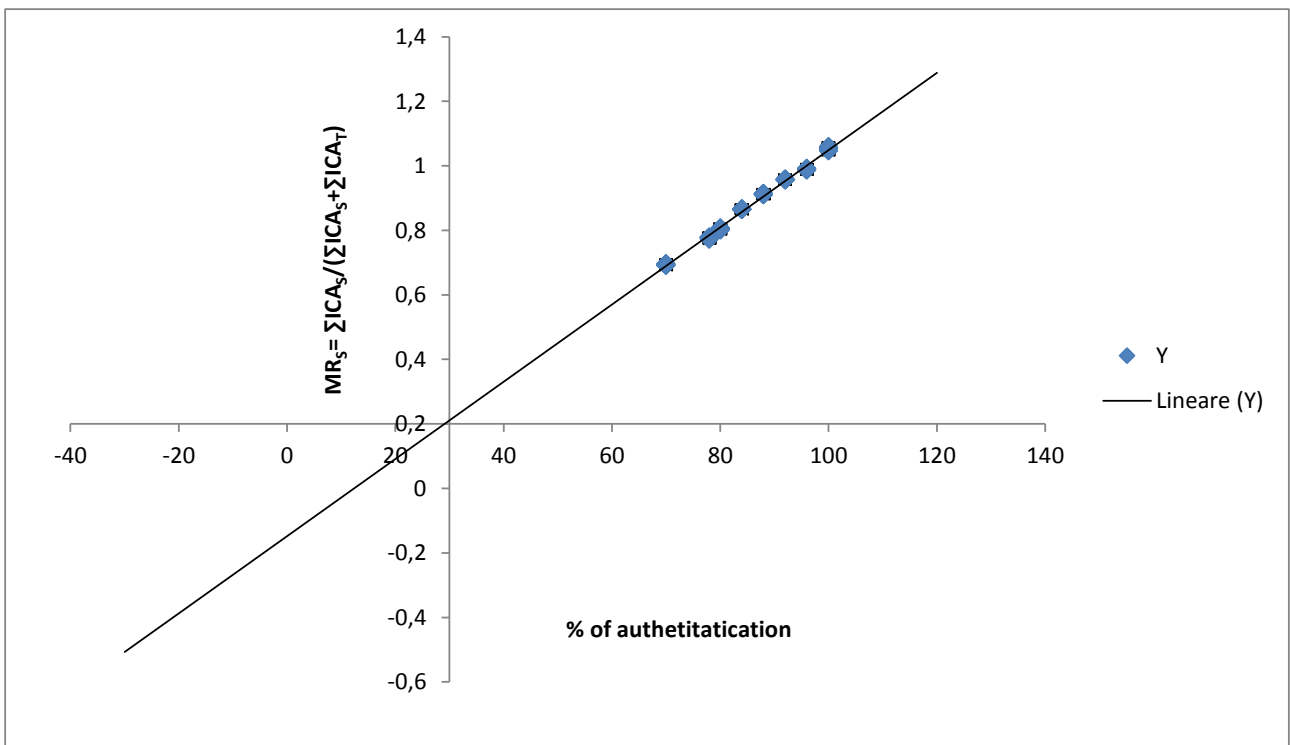


Figure 6S. Working calibration curve.



Intercept	$-0,1482 \pm 0,0081$
Slope	$0,0120 \pm 0,0001$