

### Supporting figures

Fig. S1 MALDI-MS Spectra of (A) DHB matrix, and (B) MFA with DHB as matrix.

Fig.S2. MALDI-MS spectra of MFA (A) LDI-MS without any matrix (B) with C-dots as matrix in positive mode.

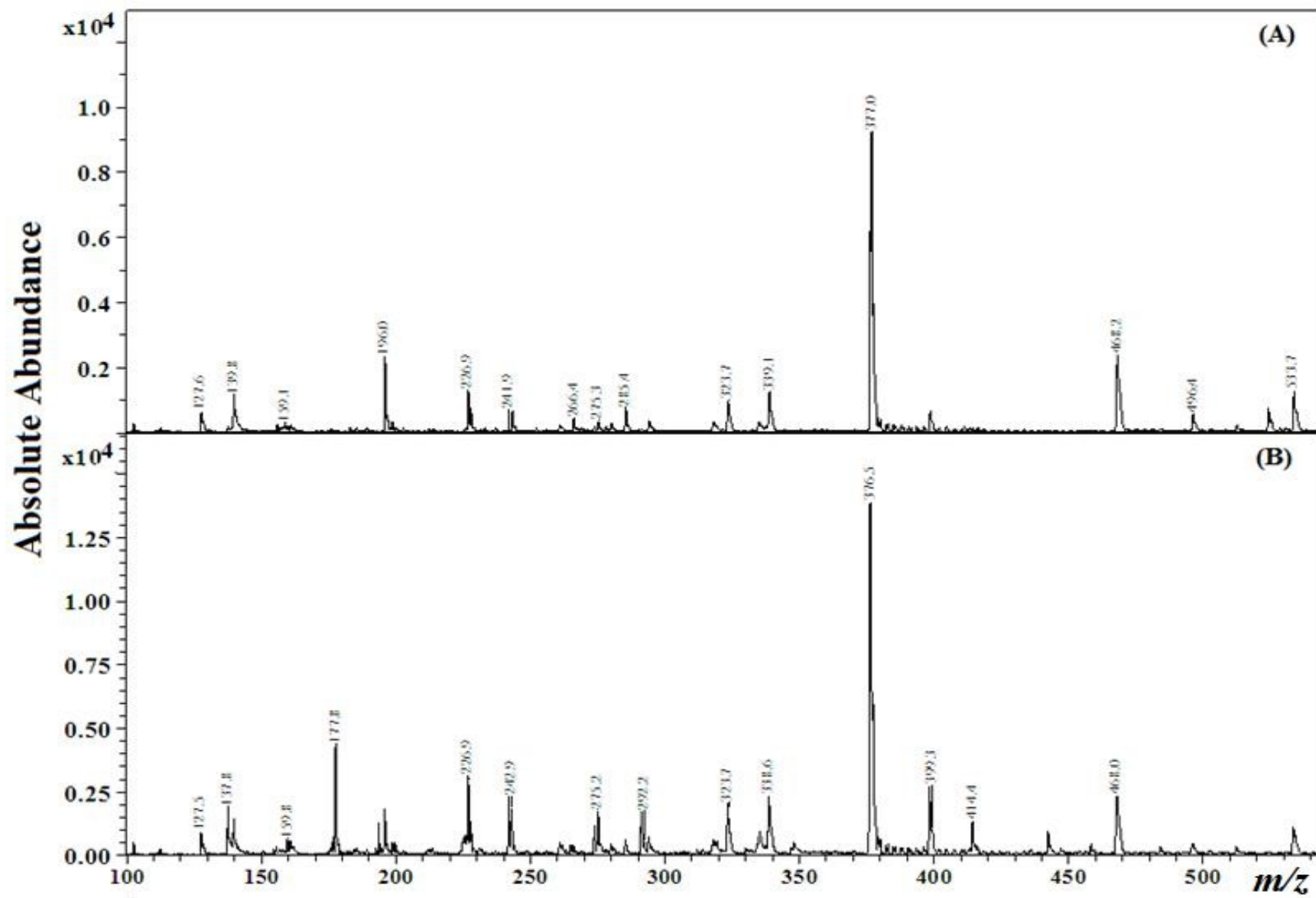
Fig.S3. MALDI-MS spectra of MFA (A) LDI-MS without any matrix (B) with C-dots as matrix in negative mode.

Fig.S4. MALDI-MS sample to sample reproducible spectra of MFA (A) without (B) with C-dots as matrix in positive mode.

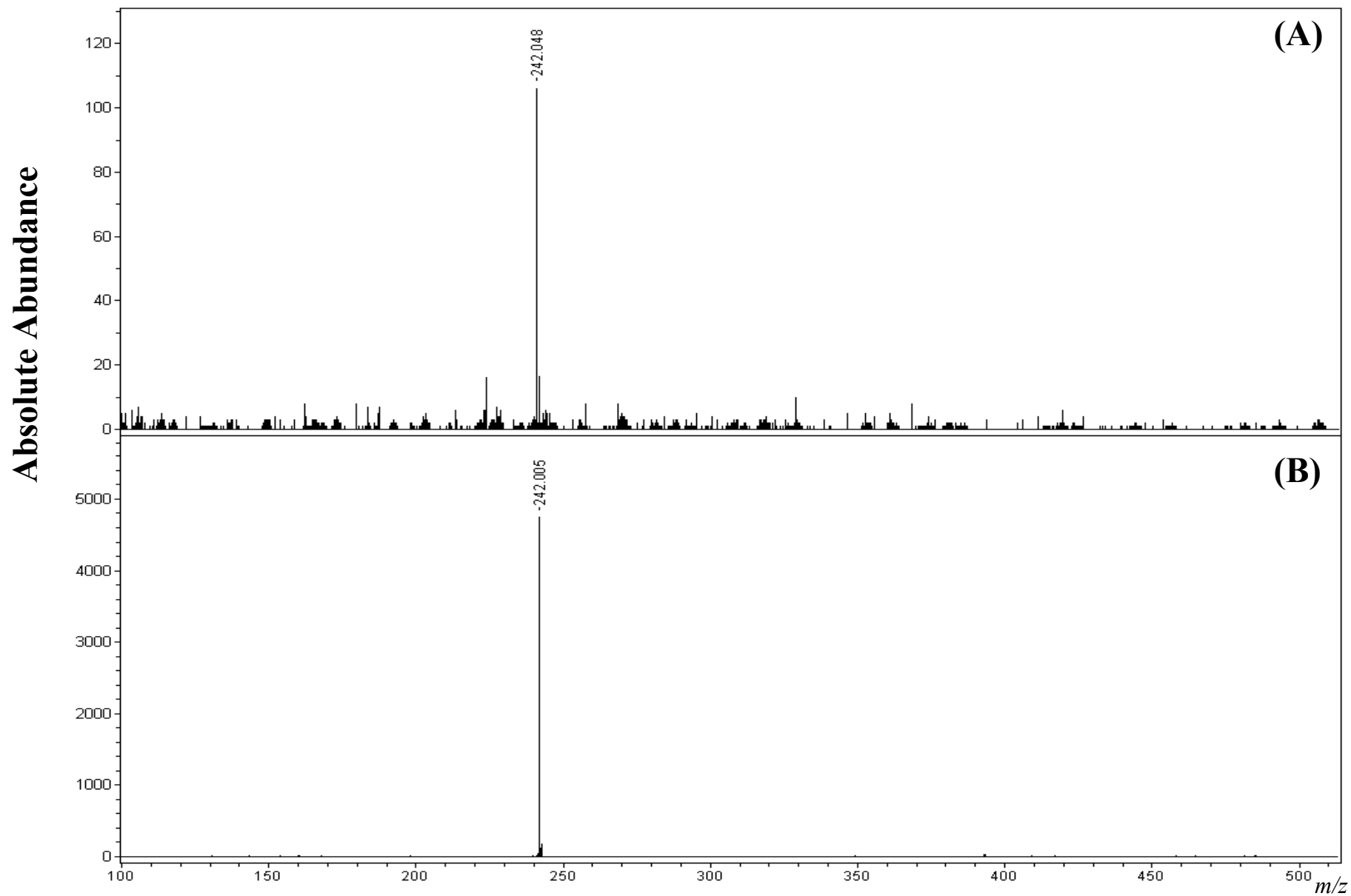
Fig.S5. MALDI-MS sample to sample reproducible spectra of MFA (A) without (B) with C-dots as matrix in negative mode.

Fig. S6 Calibration curves for the quantification of MFA (10-100 ng/ $\mu$ L in serum with positive (A) and negative ion mode (B)).

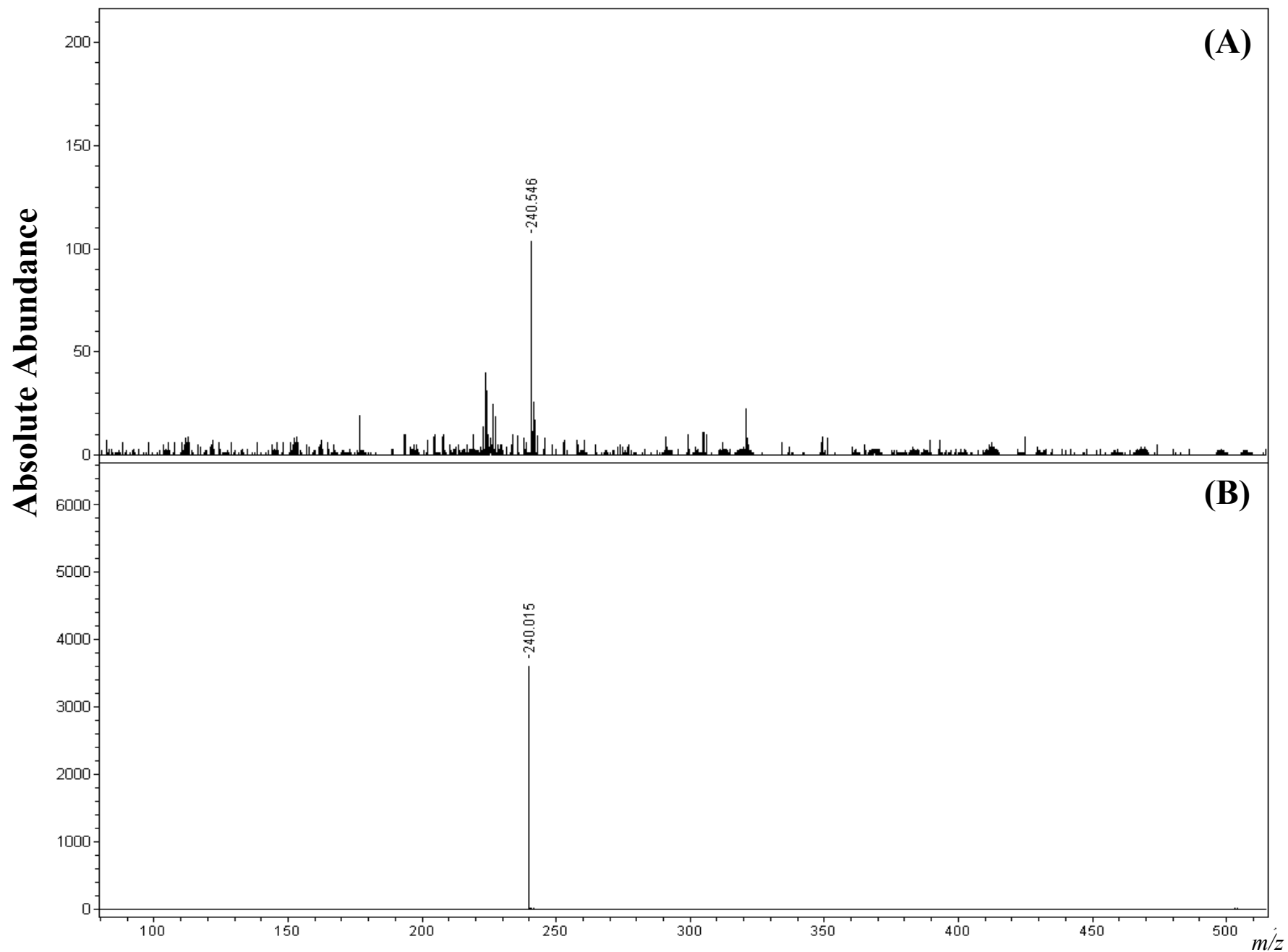
Fig. S1



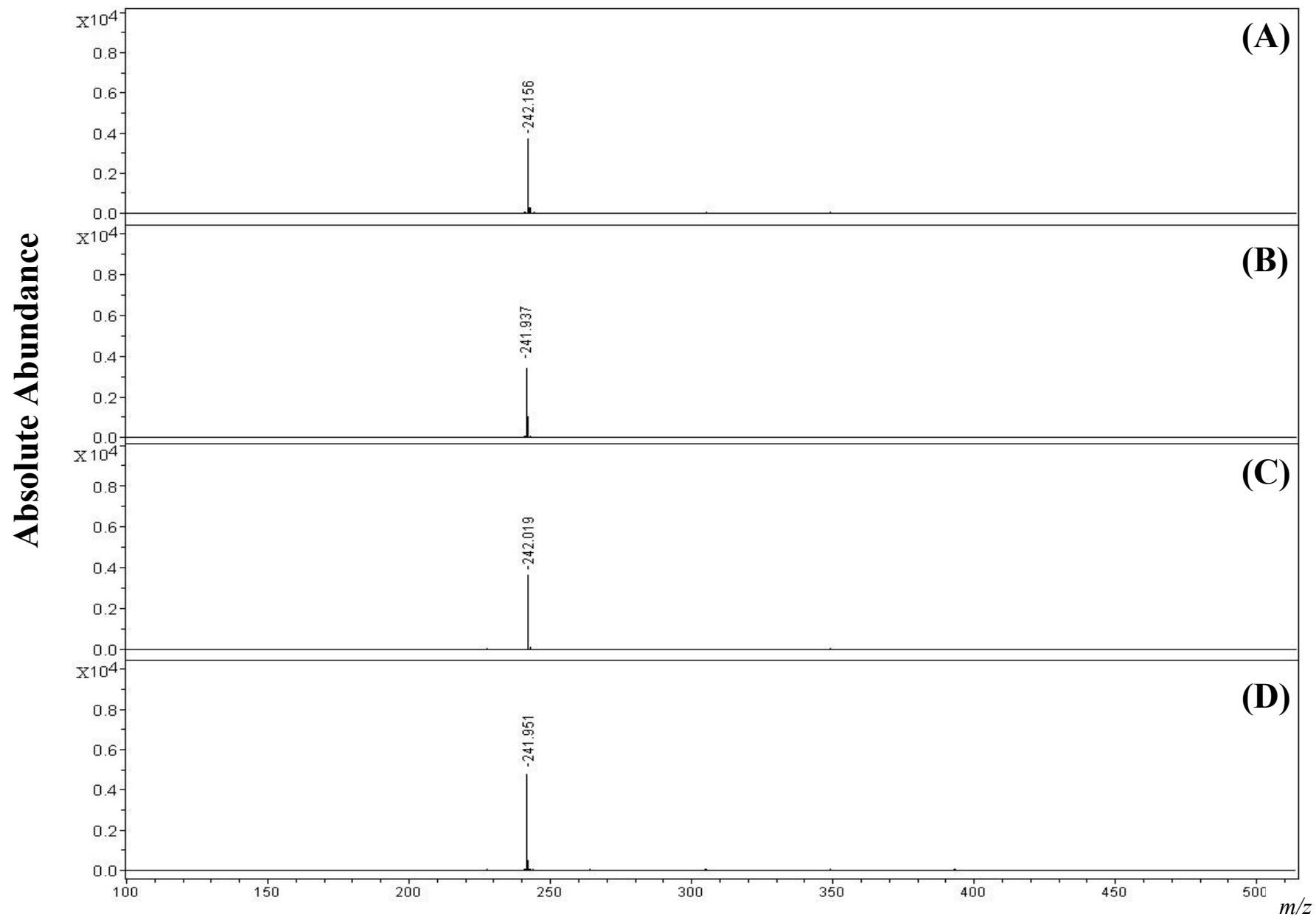
**Fig. S2**



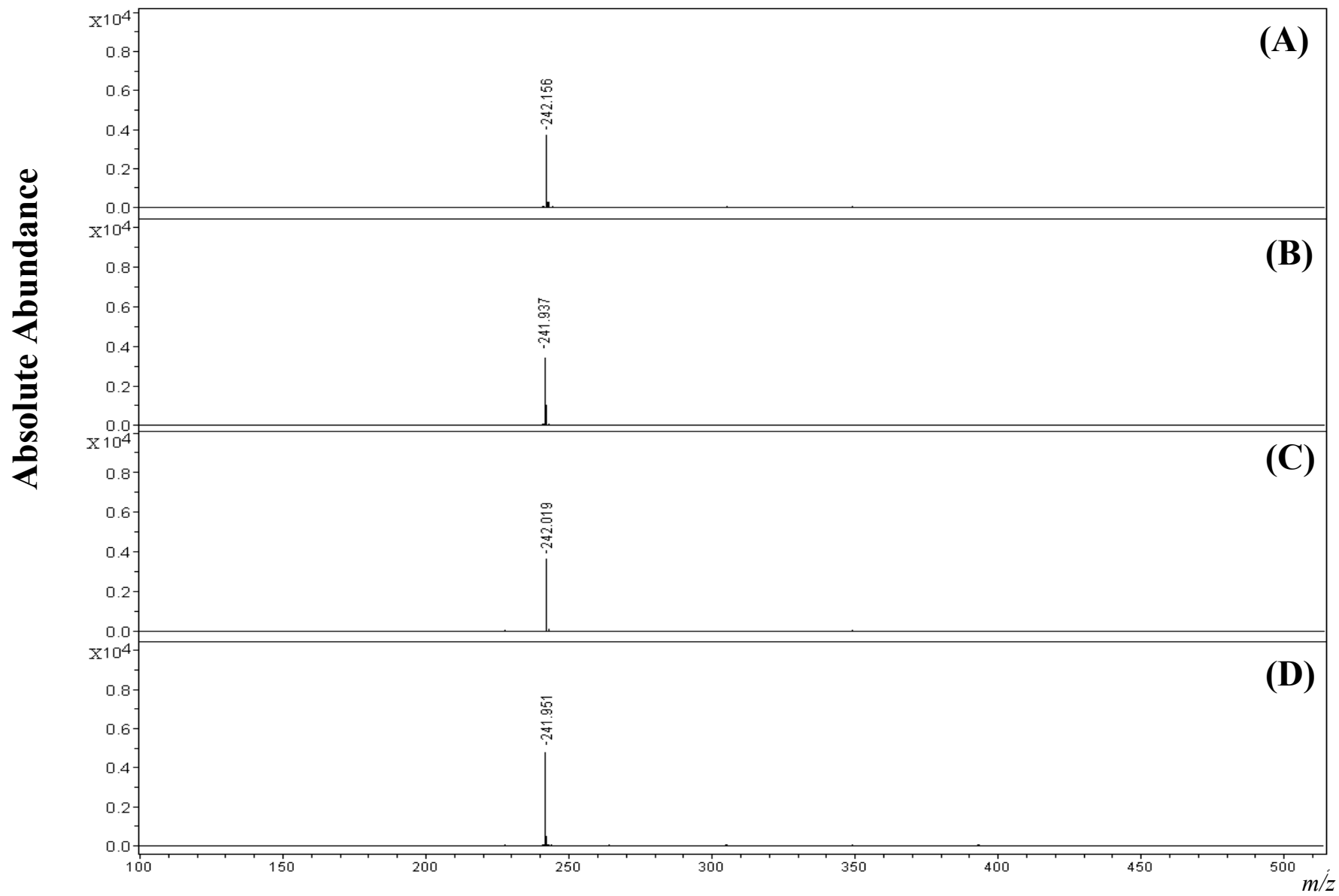
**Fig. S3**



**Fig. S4**



**Fig. S5**



**Fig. S6**

