Supplementary Material

Developmental patterning and segregation of alkaloids in areca nut (seed of *Areca catechu*) revealed by magnetic resonance and mass spectrometry imaging

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The location of the typical voxel chosen is depicted in Fig. S1.

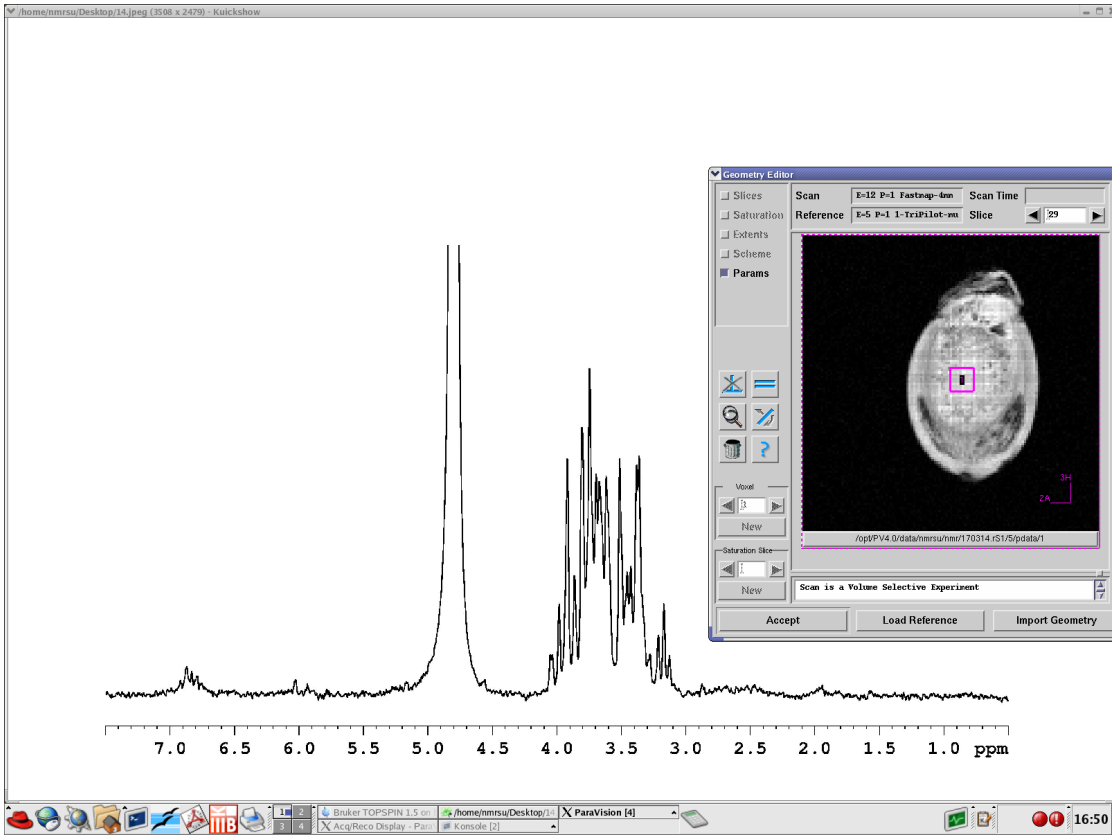

Fig. S1. Screenshot of volume localized NMR spectrum, with inset showing the selected voxel depicted in pink outline.

A representative spectrum obtained from the earliest stage of development, prior to inception of villi-like structure formation, is shown in Fig. S2.

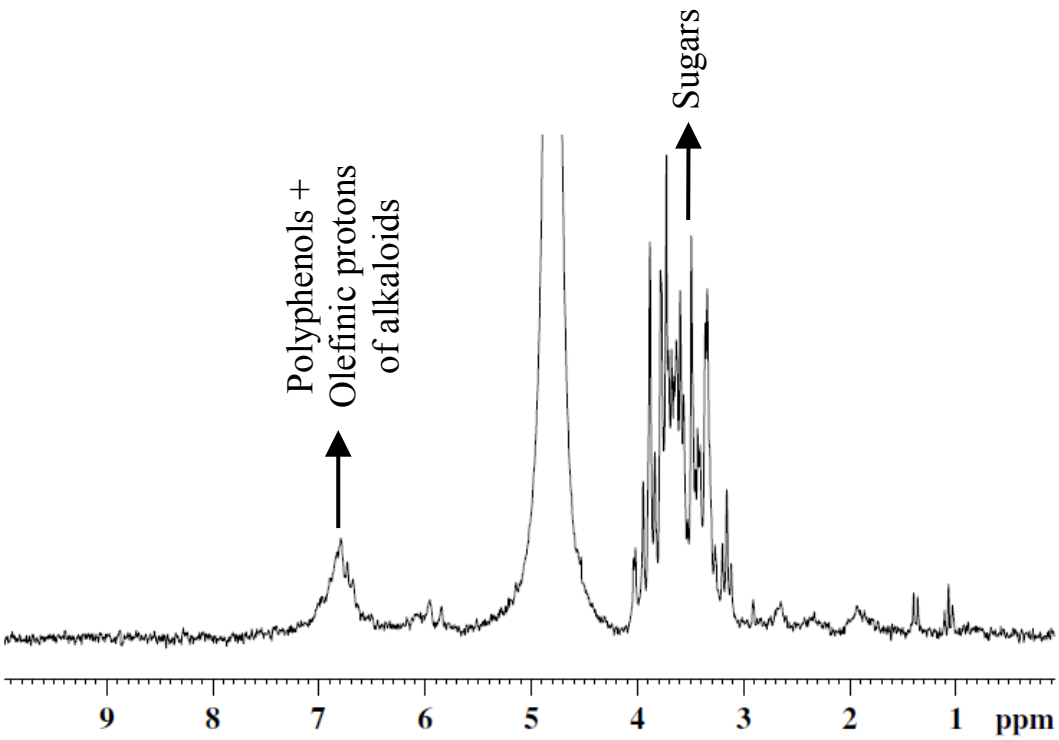

Fig. S2. A representative volume localized NMR spectrum from the initial (pre-tender) stage of areca nut development. Experimental parameters are same as in the main text.

Lipid content seems to increase considerably as the fruit ripens (at 1.5 ppm). Fig. S3 shows the changes observed in the various stages of growth of the areca nut.

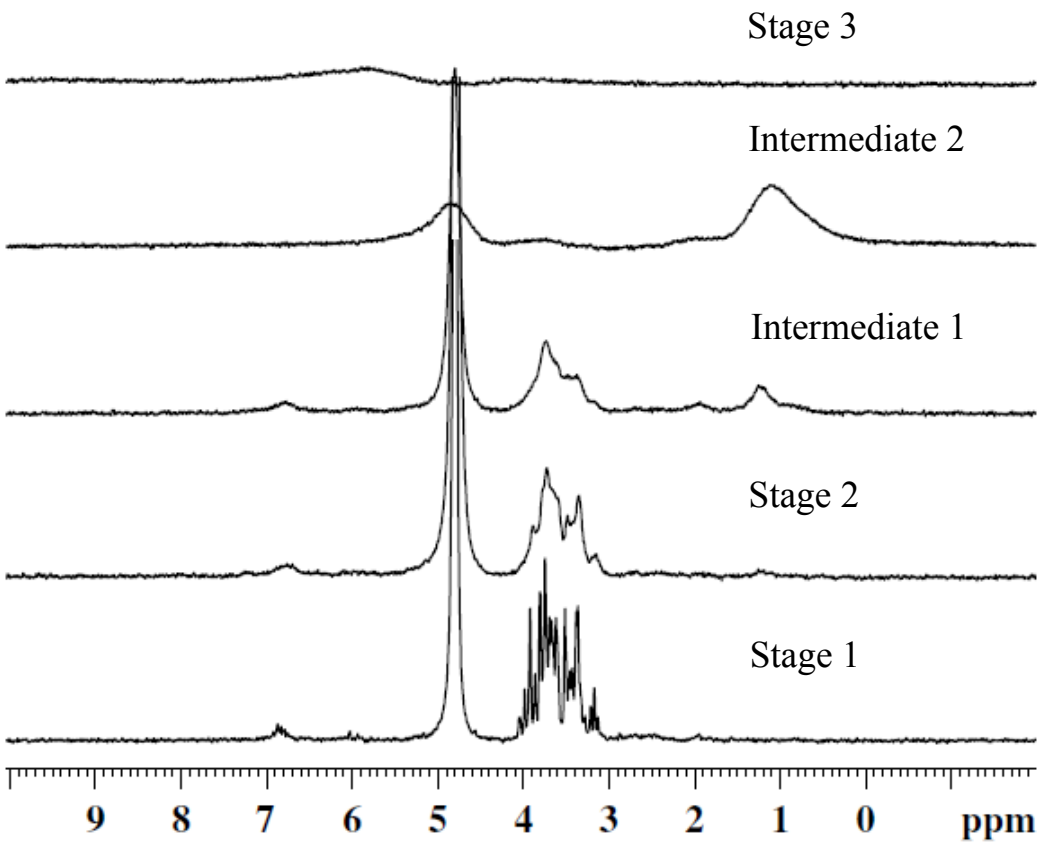

Fig. S3. Bottom to top: volume localized NMR spectra from the initial stage of areca nut development to the final stage.

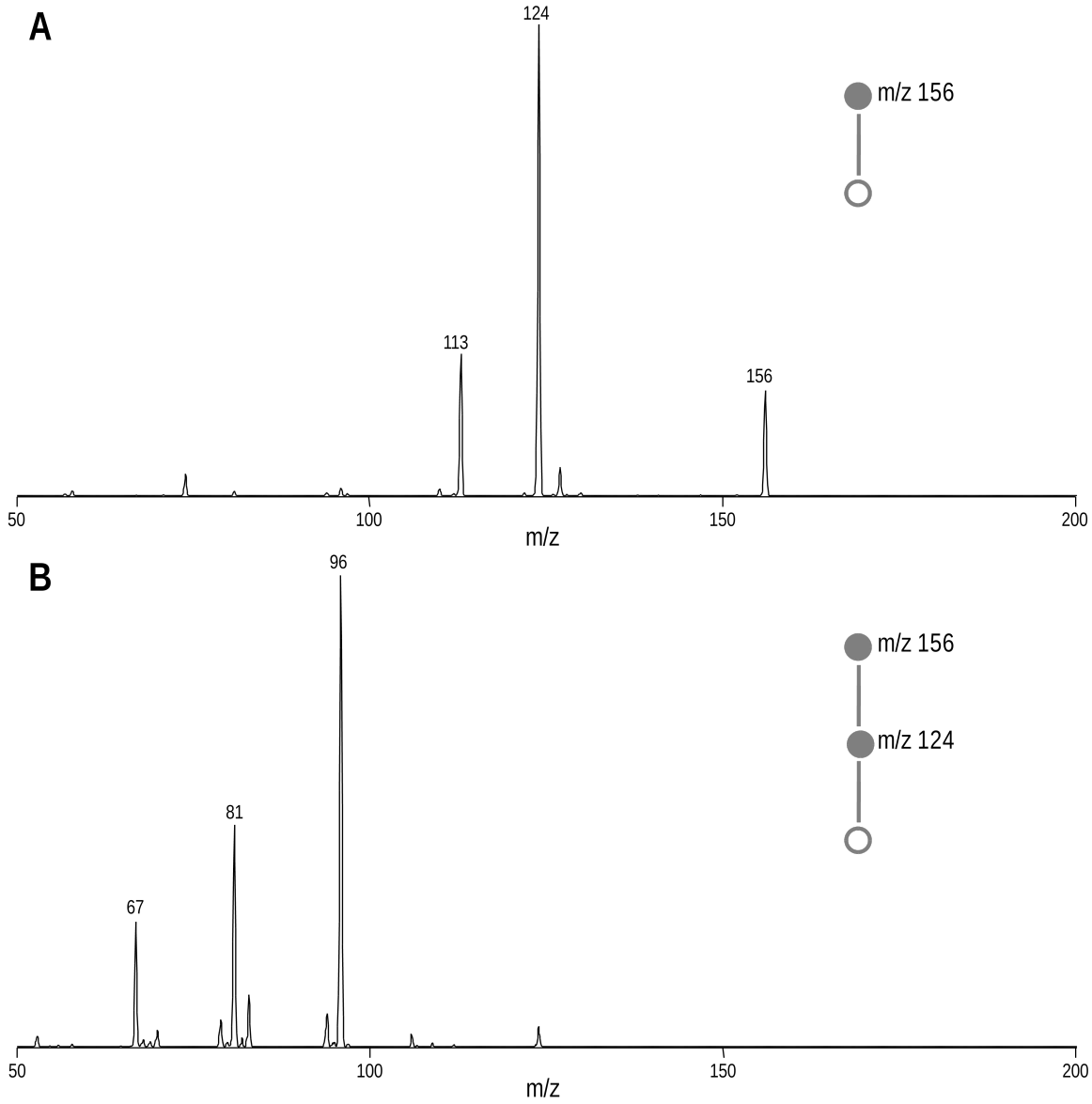

Fig. S4. Tandem ESI mass spectra of arecoline (*m/z* 156) from methanolic extract of areca nut.

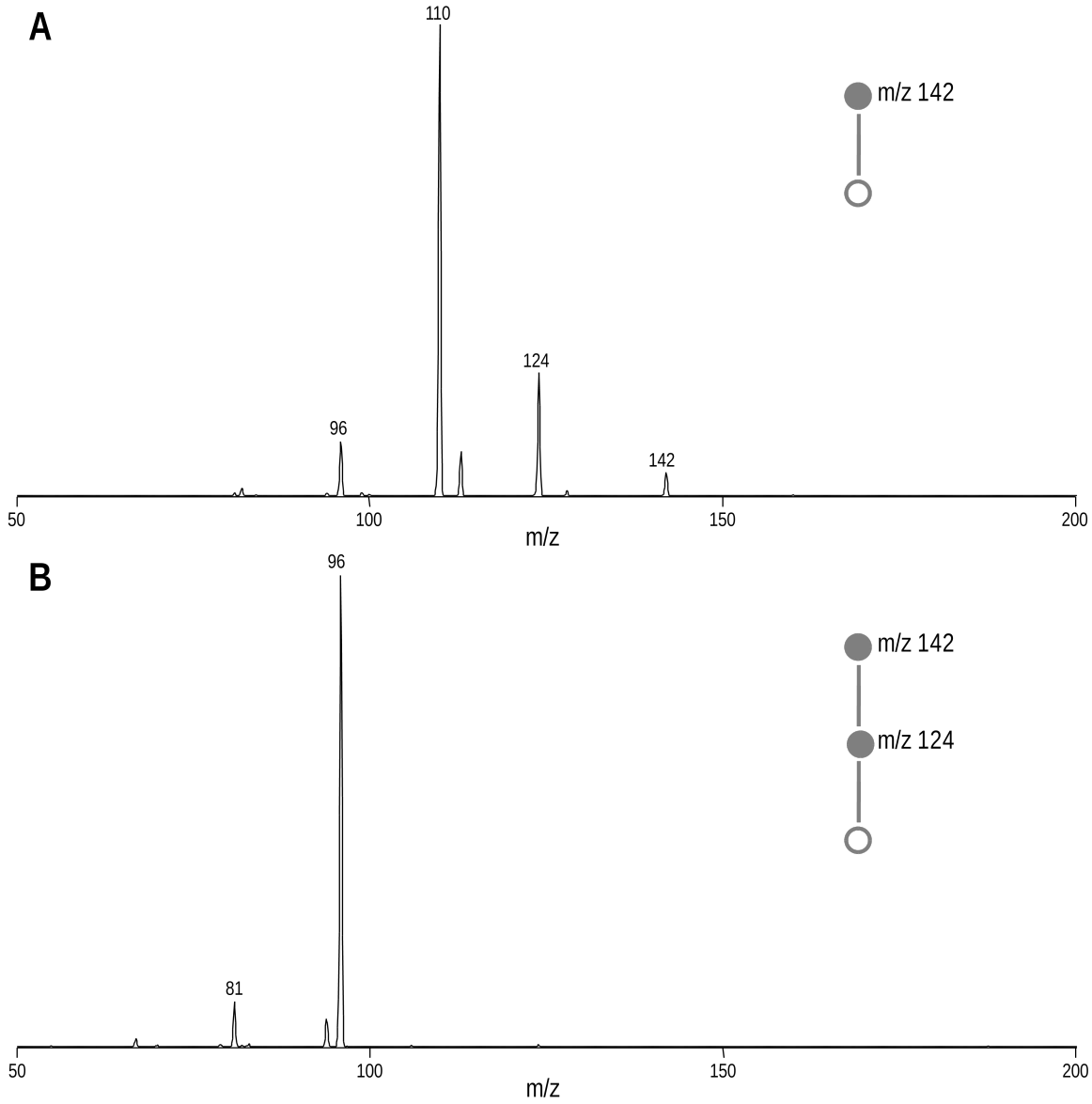

Fig. S5. Tandem ESI mass spectra of arecaidine (*m/z* 142) from methanolic extract of areca nut.

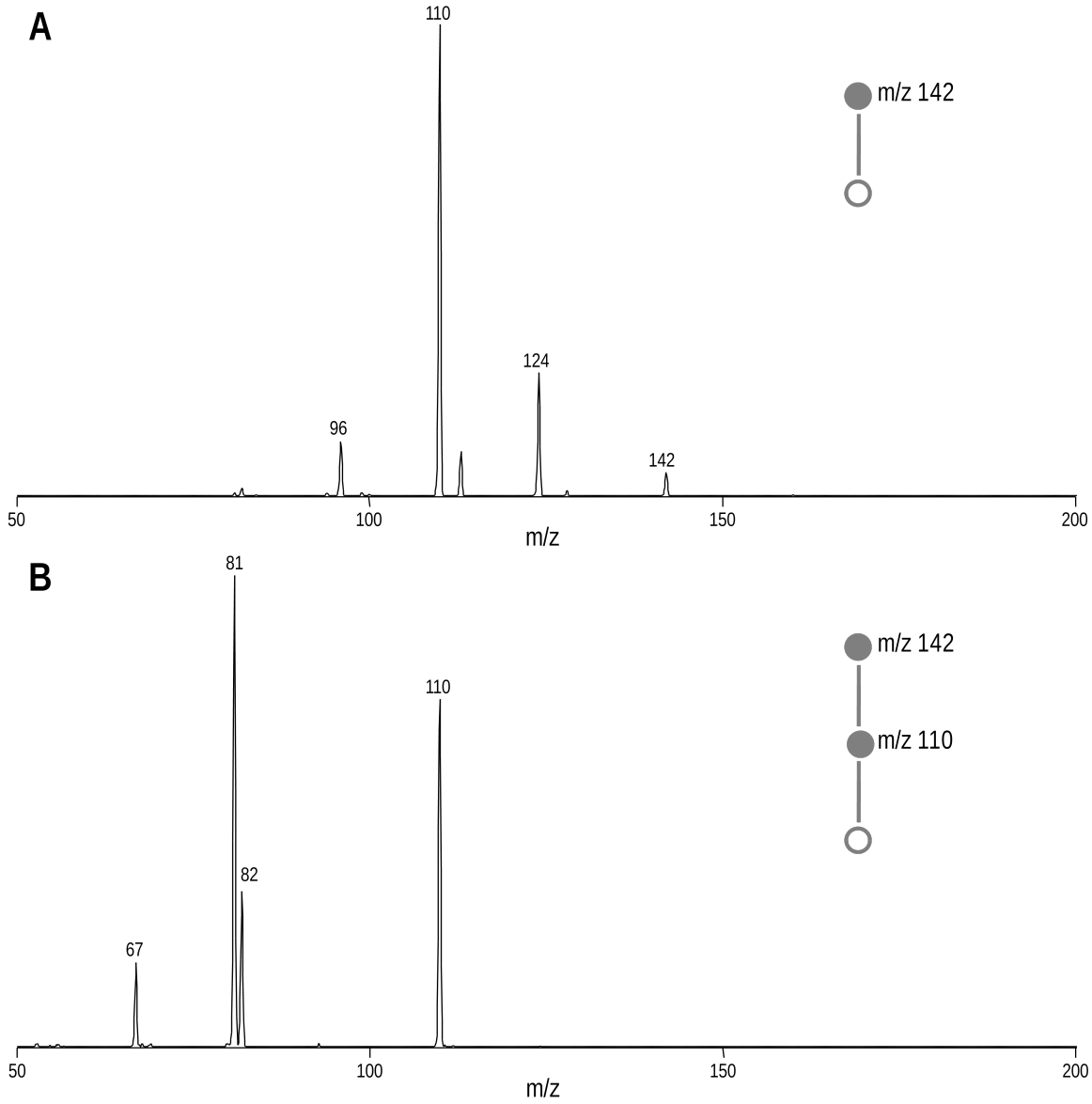

Fig. S6. Tandem ESI mass spectra of guvacoline (*m/z* 142) from methanolic extract of areca nut.

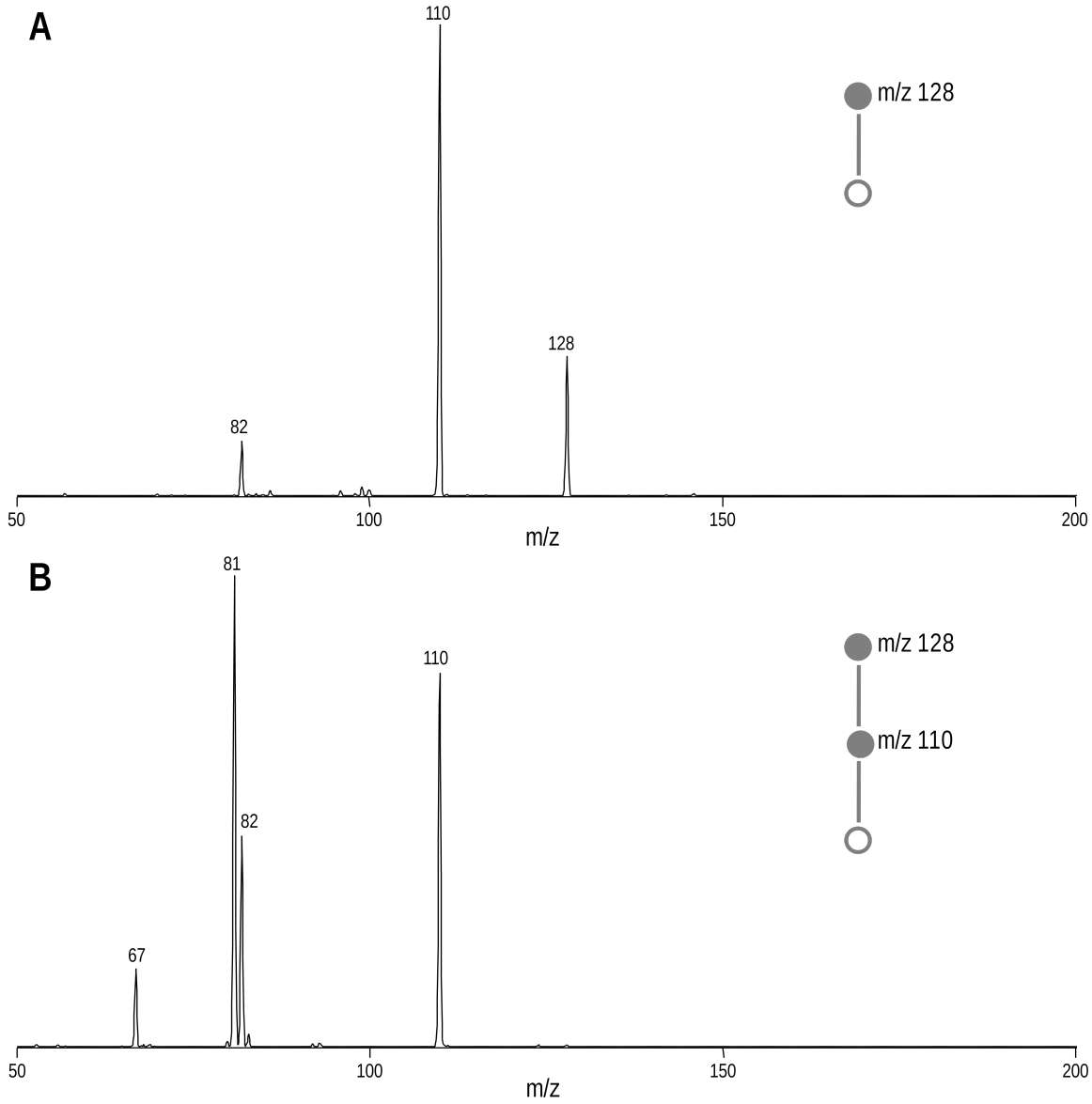

Fig. S7. Tandem ESI mass spectra of guvacine (*m/z* 128) from methanolic extract of areca nut.