Supporting Information for

Quantitative HPLC-MS/MS Analysis of Toxins in Soapberry (*Sapindaceae*) Seeds: Methylenecyclopropylglycine and Hypoglycin A

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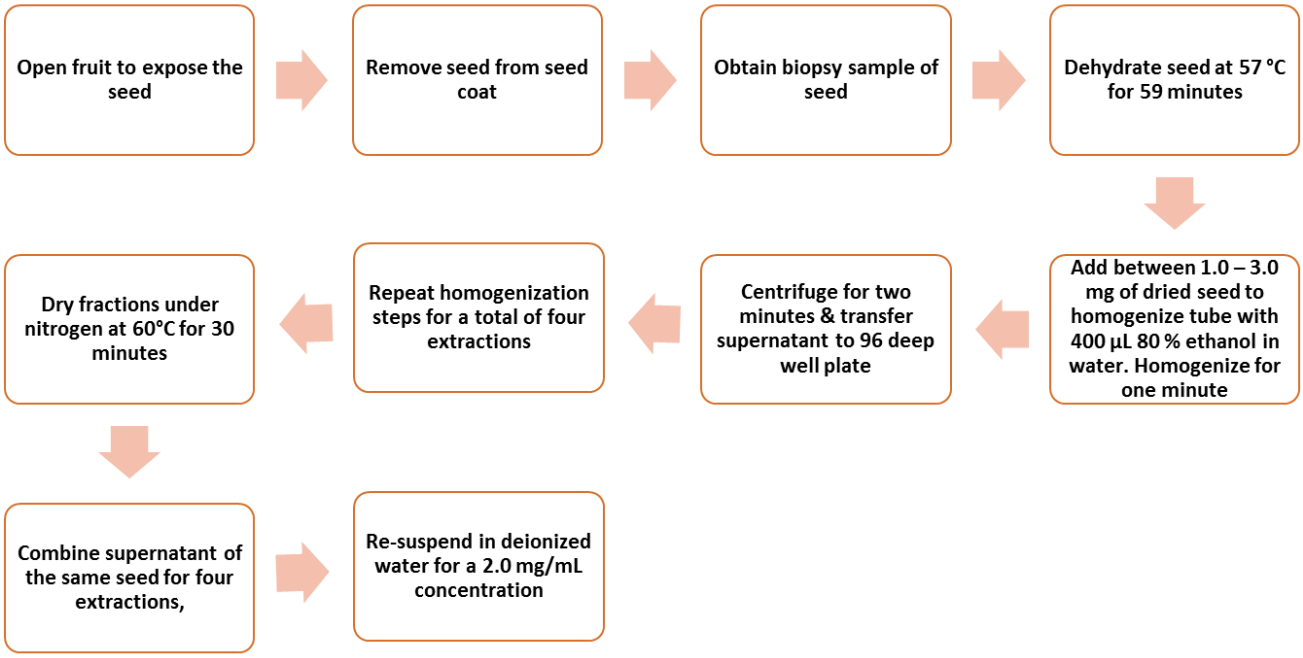


Figure S1: Soapberry seed extract preparation analytical flowchart

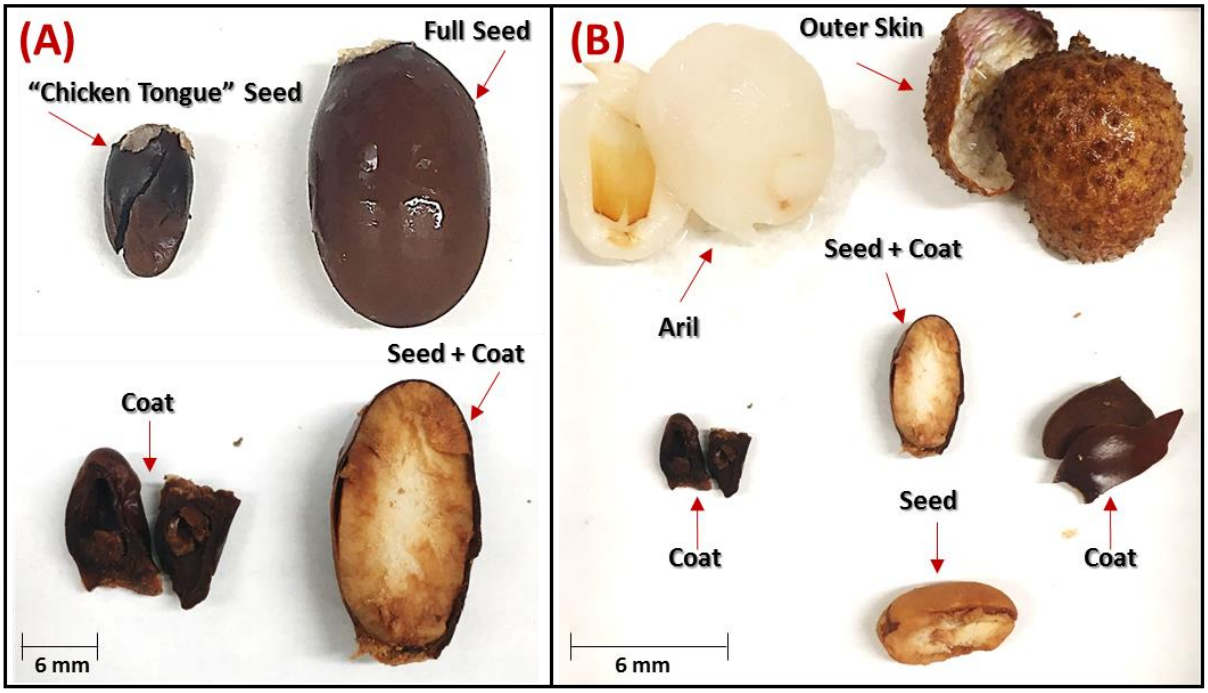


Figure S2: (A) Image showing size difference of "chicken tongue" and full litchi seeds. A "chicken tongue" is a small, aborted seed seen on the left of this image. The fully grown litchi seed to the right is significantly larger. Each seed was halved to observe the content difference. The chicken tongue on the left lacks a seed inside the outer coat, while a fully grown litchi has a large seed portion inside the coat. Chicken tongues (n=4) were not tested because they lacked the seed portion that toxins were extracted from. **(B)** Layers of litchi fruit consist of the aril, outer skin, seed, and seed coat. The aril is the fleshy edible portion, and the seed is protected by the coat (shown attached and removed). The seed was separated from the coat prior to MCPG and HGA extraction.

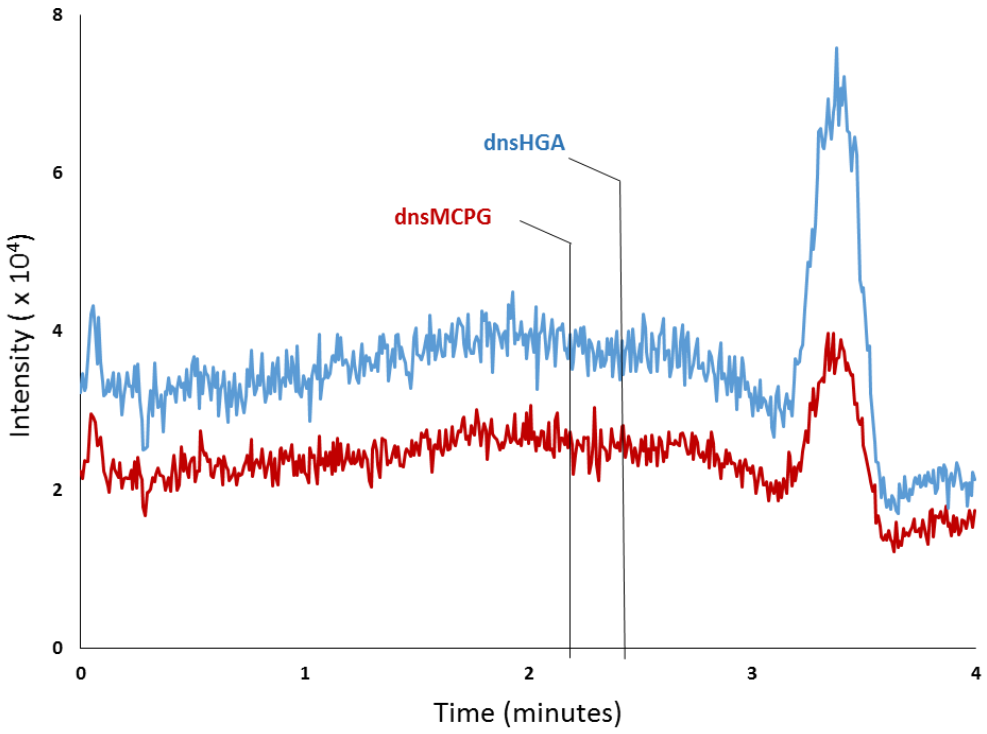
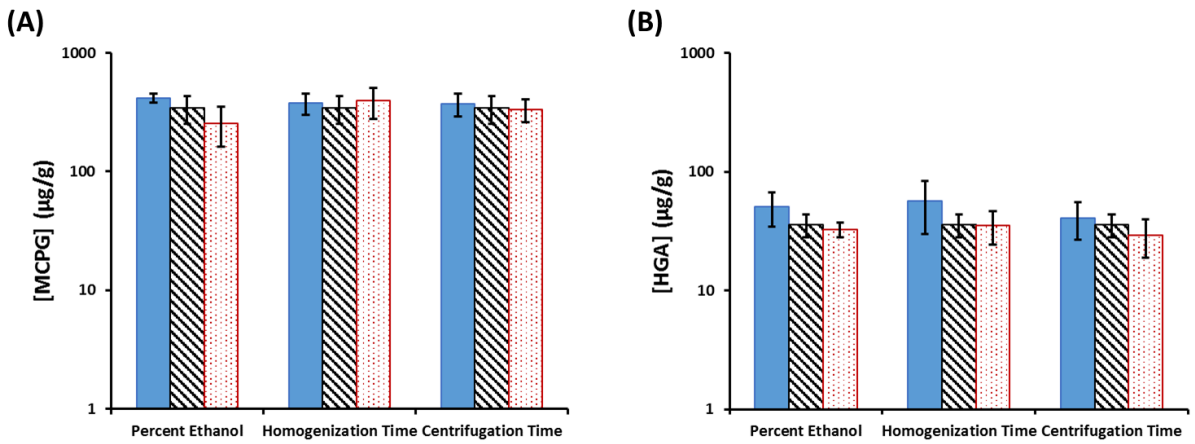


Figure S3: Evaluation of rambutan seed matrix effects. A 4.0 µL injection of 1.00 mg/mL rambutan seed extract (matrix blank) in 0.1 % formic acid in water was injected onto the C18 column. During injection, a 200. ng/mL solution of dns-MCPG (bottom) and dns-HGA (top) was infused directly and no significant matrix effects were observed at the expected retention times of 2.62 minutes for dns-MCPG and 2.79 minutes for dns-HGA.



* y axis is on log scale

Figure S4: Ruggedness testing results for MCPG and HGA. Both toxins (A) MCPG and (B) HGA were extracted from a litchi seed at low (solid), final (stripes), and high (dots) level variables. Low conditions were 60 % ethanol, 30 seconds homogenization, and 1 minute centrifugation. Final conditions were the ones used for characterization: 80 % ethanol, 60 seconds homogenization, and 2 minutes centrifugation. High conditions were 100 % ethanol, 90 seconds homogenization, and 3 minutes centrifugation.

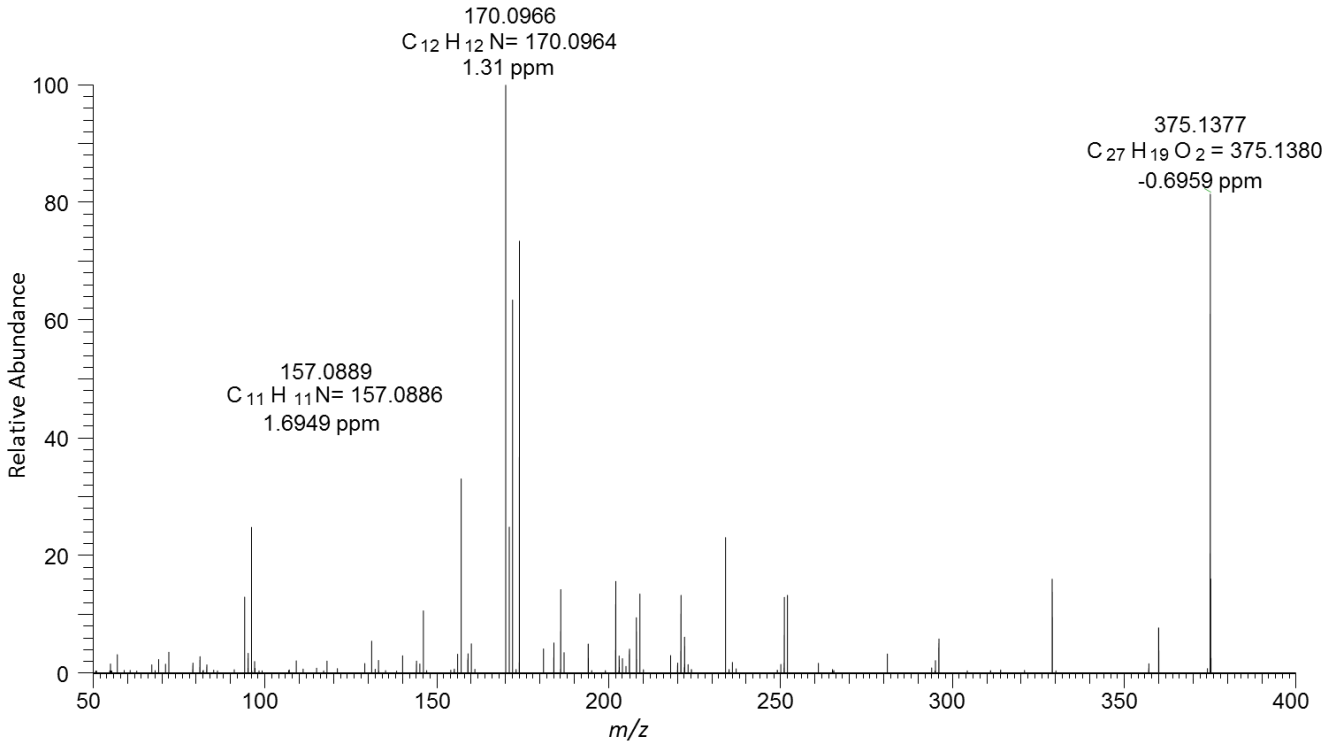


Figure S5: High mass accuracy product ion spectrum of an isomer of HGA previously observed in the longan seed by H. Minakata, *et al*. and aril by S. Isenberg, *et al*. When dansylated, this isomer is baseline resolved in longan and mamoncillo seeds. Shown above is the precursor ion (*m/z* 375.1377) fragmenting to the two major product ions *m/z* 170.0965 and *m/z* 157.0889.