



Litchi Seed Extracts Analyzed by LCMS - AppNote

Date: 22-JUNE-2015 Last Updated: 7-FEBRUARY-2026

LC-MS Determination of Toxic Amino Acids in Litchi Seed Extracts Using Cogent Diamond Hydride™ (ANP)

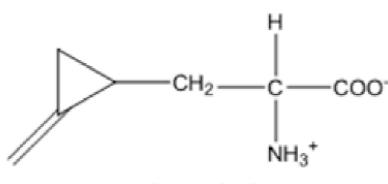
Hypoglycin A and methylenecyclopropylglycine are two compounds found in the extract of Litchi seeds that studies have shown to be toxic. Methylenecyclopropylglycine inhibits the synthesis of fatty acids from glucose, and therefore undernourished children are more at risk since their glucose reserves are low.

This study used LCMS with a Cogent Diamond Hydride™ column to detect these compounds in Litchi extracts. The results confirmed the presence of these compounds in all the extracts except the overripe fruit. The conclusion that can be gleaned from this work is that selection of a proper harvest time can allow for safe fruits to be sold to the consumer.

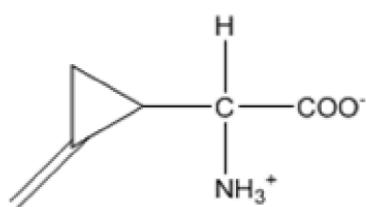
Summary

- What was done: LC-MS on Diamond Hydride™ detected HGA & MCPG in litchi seed extracts.
- Key result: Absent only in overripe fruit, implicating harvest maturity as a practical control.
- Why this method: TYPE-C silica in ANP provides retention/selectivity for very polar, toxic amino acids with MS-friendly conditions.

See Downloadable pdf Below for the Full Study with Method Conditions.



Hypoglycin A



Methylenecyclopropylglycine

Note : There have been epidemics in India, mostly affecting malnourished children. Authorities have identified consumption of Litchi fruit as the cause of the illness.

Attachment Analysis of Litchi Seed Extracts pdf Click on this link: [Download File](#)



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