

Innovative method of high sensitivity and separation detection for ciguatoxin analogues by LC-MS/MS

Ciguatera Fish Poisoning is the world's largest food poisoning. The US FDA recommends an acceptable dose of 0.01 µg CTX1B equivalent/kg. The FDA level of sensitivity detection is possible by using LC/MS/MS equipment of one manufacturer, and a method has been reported to detect $[M+Na]^+$ > $[M+Na]^+$. In this study, we found a highly sensitive method for the detection of ciguatoxins, $[M+Na]^+$ > $[M+Na]^+$ or $[M+Li]^+$ > $[M+Li]^+$, by adding very small amounts of alkali metals such as Na^+ or Li^+ to the mobile phase. This method suggests that CTXs FDA level detection and high separation chromatography may be able to achieve for LC-MS from any manufacturer.