



Marine Biotoxin Reference Materials: Qualitative and Quantitative Measurements with Low Toxin Quantities



講師

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Summary

Biography

2019-present: Research Officer, NRC Canada

2019: Department Chemistry, University of British Columbia – Okanagan Campus (PhD)

2011-2018: Research Associate, Natural Health and Food Products Research Group, British Columbia Institute of Technology

2011: Department of Agriculture, Food and Nutritional Sciences, University of Alberta (MSc)

AOAC International,
Official Methods Board Member (2020-present)
Technical Division on Reference Materials Executive Committee (2021-present)

Marine biotoxins pose a threat to global food safety. The availability of reference materials is essential for qualitative identification and quantitative measurements to ensure seafood is safe for consumption. The reference material program at the NRC's Metrology Research Centre has produced an array of marine biotoxin certified reference materials for over four decades. Several techniques are used to establish certified values, including qNMR, LC-MS, LC-CLND, etc. Production of marine toxin reference materials heavily relies on naturally contaminated materials, where the prevalence of these natural products is comparatively low relative to many other natural product, toxin or residue related reference materials, which presents a set of unique measurement challenges. This presentation will discuss how these challenges were mitigated using 40 µg of Caribbean ciguatoxin-5 (C-CTX5) isolated from *Gambierdiscus silvae*. A combination of high purity isolation techniques, non-uniform sampling (NUS) and microprobe NMR enabled qualitative and quantitative measurements leading to investigations into the feasibility of future C-CTX reference materials.

日時

2024年10月11日 (金)

10 : 30 ~ 11 : 30 開場 10 : 15

国立医薬品食品衛生研究所 2階 共用会議室

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