

Resource Summary Report

Generated by [dkNET](#) on Sep 7, 2026

Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage and Extraction of HAB Toxins

DOI:10.17504/protocols.io.xkpfkvn

Type: Protocol

Proper Citation

Kendra Negrey, Meredith Howard, Jayme Smith, Raphael Kudela, David Caron 2019. Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage and Extraction of HAB Toxins. protocols.io
dx.doi.org/10.17504/protocols.io.xkpfkvn

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.xkpfkvn>

Authors: Kendra Negrey, Meredith Howard, Jayme Smith, Raphael Kudela, David Caron

Summary: SPATT has been developed and tested for a variety of resins (see review by Kudela, 2017). These Standard Operating Procedures (SOP) outline the use of the resin DIAON HP20 since it has been demonstrated to quantify microcystins, anatoxin-a, saxitoxin, domoic acid, and okadaic acid in fresh, brackish, and marine waters, all from the same SPATT sampling device (Lane et al. 2010; Miller et al. 2010, Kudela 2011, Gobble and Kudela, 2014, Howard et al., 2017, Kudela, 2017, Peacock et al., 2018). Cylindrospermopsin and nodularin have also been detected using SPATT with DIAON HP20 resin in California, however, the use of DIAON HP20 for these toxins has not been well characterized in the laboratory. This methodology is ready for wider adoption by the research, monitoring, and management communities interested in detecting and tracking the dynamics of freshwater and marine toxins. The SOP described herein for the assemblage and construction of SPATT bags can be used for deployment in freshwater, brackish and marine environments and the extraction process described below is for the analysis of both marine toxins and cyanotoxins.

Affiliations: University of California, Santa Cruz, University of California, Santa Cruz, University of Southern California, University of Southern California, University of Southern California

Version: 1

Publication Date: 2019

Proper Citation: Kendra Negrey, Meredith Howard, Jayme Smith, Raphael Kudela, David Caron 2019. Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage and Extraction of HAB Toxins. protocols.io
dx.doi.org/10.17504/protocols.io.xkpfkvn

Record Creation Time: 20210329T220531+0000

Record Last Update: 20210329T220958+0000

Data and Source Information

Source: