

Jan 03, 2023

Version 1

Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage and Extraction of HAB Toxins v2 V.1

Y

Forked from <u>Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage</u> and Extraction of HAB Toxins

DOI

dx.doi.org/10.17504/protocols.io.dm6gpb255lzp/v1

Kendra Negrey¹, Meredith Howard¹, Jayme Smith², Raphael Kudela², David Caron²

¹University of California, Santa Cruz; ²University of Southern California



Kendra Negrey

University of California, Santa Cruz

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN ACCESS



DOI: https://dx.doi.org/10.17504/protocols.io.dm6gpb255lzp/v1

Document Citation: Kendra Negrey, Meredith Howard, Jayme Smith, Raphael Kudela, David Caron 2023. Standard Operating Procedure for Solid Phase Adsorption Toxin Testing (SPATT) Assemblage and Extraction of HAB Toxins v2. **protocols.io**https://dx.doi.org/10.17504/protocols.io.dm6gpb255lzp/v1



License: This is an open access document distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Created: June 01, 2022

Last Modified: January 03, 2023

Document Integer ID: 63685

Keywords: SPATT, HAB toxins, HP20, analysis of both marine toxin, extraction of hab toxins v2 spatt, solid phase adsorption toxin testing, marine toxin, hab toxins v2 spatt, toxin, use of the resin diaon hp20, cyanotoxin, resin diaon hp20, diaon hp20 resin, spatt with diaon hp20 resin, anatoxin, saxitoxin, cylindrospermopsin, use of diaon hp20, deployment in freshwater, variety of resin, resin, extraction, microcystin, extraction process

Abstract

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, Gibble 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.

Attachments





SPATT SOP All Toxins... SPATT_SOP_2020.pdf 737KB

1.1MB

Troubleshooting

