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Quantifying Biogenic Silica (bSi) Deposition Rates Adapted Method & Fluorescence Reading (PDMPO) via Fluorometer

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ABSTRACT

This method can be used to assess and quantify the rate of silica deposition (bSi) over time in diatoms to determine their rate of frustule synthesis. This protocol has been adapted for the processing of both cultures as well as environmental samples when inoculated with PDMPO [2-(4-pyridyl)-5-((4-(2-dimethylaminoethylaminocarbonyl)methoxy)phenyl)oxazole], which is a fluorescent dye that is co-deposited with silica during frustule biosynthesis in a 3230:1 Si:PDMPO (mol:mol) ratio.

MATERIALS

MATERIALS

LysoSensor™ Yellow/Blue DND-160 - Special Packaging Fisher Scientific Catalog
#L7545

Utilize a TD-700 Laboratory Fluorometer linked to a computer monitor with the downloaded Turner software to obtain fluorescence readings of the samples

SAFETY WARNINGS

See SDS (Safety Data Sheet) for hazards and safety warnings.

OPEN ACCESS

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Protocol status: Working
We use this protocol and it's working

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COLLECTION integer ID:
28509

Protocol

NAME

Quantifying Biogenic Silica (bSi) Deposition Rates Adapted Method

VERSION 1

CREATED BY

Ashley A HumphreyUniversity of Tennessee, Knoxville

OPEN

→

Protocol

NAME

Reading Sample Fluorescence (PDMPO) via Fluorometer

VERSION 1

CREATED BY

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OPEN

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