Daily growth data of the Karlodinium veneficum growth experiment conducted in the Horn Point Laboratory between June 2021- January 2022.

Website: https://www.bco-dmo.org/dataset/907393
Data Type: experimental
Version: 1
Version Date: 2023-09-01

Project
» Ecology and Oceanography of Harmful Algal Blooms (EcoHAB)

Contributors	Affiliation	Role
Glibert, Patricia A.	University of Maryland Center for Environmental Science (UMCES/HPL)	Principal Investigator
Vidyarathna, Nayani	University of Maryland Center for Environmental Science (UMCES/HPL)	Scientist, Contact
Ahn, So Hyun	University of Maryland Center for Environmental Science (UMCES/HPL)	Student
Soenen, Karen	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Abstract
Using a multifactorial design, we studied the interactive effects of temperature (15, 20, 25, 28 and 30 0C), salinity (5, 10, 15, 20 and 30) and light (low-100 and high-300 µmol photons m−2 s−1) on growth, thermal niche properties and cellular carbon (C) and nitrogen (N) of the toxic dinoflagellate, Karlodinium veneficum, originated from the Chesapeake Bay. Here we report the daily growth data measured as raw fluorescence at each experimental combination in quadruplicates and the C and N cell quota data measured in the final samples for each experimental combination in duplicates.

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Coverage

Temporal Extent: 2021-06-11 - 2021-11-12

Dataset Description

These data (after processing) were published in Vidyarathna et al (2023) as Figure 1, Figure 3 and supplementary table 1 and 3.

Methods & Sampling

Laboratory experiments were conducted in the Horn Point Laboratory, University of Maryland Center for Environmental Science during June 2021- January 2022.

Algal growth data was collected by measuring *in vivo* chlorophyll *a* (chl *a*) fluorescence (TD 700; Turner Designs, USA) of the whole cultures daily until they reach the late exponential phase (4-7 days).

Data Processing Description

No data processing, these are the raw data.

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Data Files

File
907393_v1_growth.csv (Comma Separated Values (.csv), 27.73 KB) MD5:8afef07a9e98ded320d56c6be1b5a700 Primary data file for dataset 907393

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Related Publications

Vidyarathna, N. K., Ahn, S. H. (Sophia), & Glibert, P. M. (2023). Thermal niche of the dinoflagellate Karlodinium veneficum across different salinity and light levels. Journal of Plankton Research, 45(4), 604–613. https://doi.org/10.1093/plankt/fbad019
Results

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Related Datasets

IsRelatedTo

Vidyarathna, N., Glibert, P. A., Ahn, S. H. (2023) **Cellular carbon (C) and nitrogen (N) data of the Karlodinium veneficum growth experiment conducted in the Horn Point Laboratory between June 2021- January 2022.** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 1) Version Date 2023-09-01 doi:10.26008/1912/bco-dmo.907463.1 [view at BCO-DMO]
Relationship Description: Data are part of same experiment.

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Parameters

Parameter	Description	Units
Light	Average light intensity at which the cultures were grown	µmol photons m−2s−1
Salinity	Salinity of the culture media	unitless
Temperature	Temperature at which cultures were acclimated and grown	degrees Celsius (°C)
Date	Date in ISO format %Y-%m-%d	unitless
Replicate	Sampling replicate (1,2,3 or 4)	unitless
Fluoresence	Fluoresence (relative)	unitless

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Instruments

Dataset-specific Instrument Name	Fluorometer TD 700; Turner Designs, USA.
Generic Instrument Name	Turner Designs 700 Laboratory Fluorometer
Generic Instrument Description	The TD-700 Laboratory Fluorometer is a benchtop fluorometer designed to detect fluorescence over the UV to red range. The instrument can measure concentrations of a variety of compounds, including chlorophyll-a and fluorescent dyes, and is thus suitable for a range of applications, including chlorophyll, water quality monitoring and fluorescent tracer studies. Data can be output as concentrations or raw fluorescence measurements.

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Project Information

Ecology and Oceanography of Harmful Algal Blooms (EcoHAB)

Website: https://coastalscience.noaa.gov/science-areas/habs/ecohab/

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Funding

Funding Source	Award
National Oceanic and Atmospheric Administration (NOAA)	NA17NOS4780180

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