

# 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
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## Abstract

Using a multifactorial design, we studied the interactive effects of temperature (15, 20, 25, 28 and 30 °C), salinity (5, 10, 15, 20 and 30) and light (low-100 and high-300  $\mu\text{mol photons m}^{-2} \text{s}^{-1}$ ) 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
<b>907393_v1_growth.csv</b> (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	$\mu\text{mol photons m}^{-2}\text{s}^{-1}$
Salinity	Salinity of the culture media	unitless
Temperature	Temperature at which cultures were acclimated and grown	degrees Celsius ( $^{\circ}\text{C}$ )
Date	Date in ISO format %Y-%m-%d	unitless
Replicate	Sampling replicate (1,2,3 or 4)	unitless
Fluorescence	Fluorescence (relative)	unitless

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## Instruments

<b>Dataset-specific Instrument Name</b>	Fluorometer TD 700; Turner Designs, USA.
<b>Generic Instrument Name</b>	Turner Designs 700 Laboratory Fluorometer
<b>Generic Instrument Description</b>	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)	<a href="#">NA17NOS4780180</a>

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