

Trace-elemental data (Ba/Ca) of benthic foraminifers from core-top sediments of Gullmar Fjord, Swedish West coast

SND-ID: 2021-318-1. **Version:** 1. **DOI:** <https://doi.org/10.5878/eb67-9v72>

Download data

data.xlsx (20.67 KB)

Citation

Brinkmann, I. (2022) Trace-elemental data (Ba/Ca) of benthic foraminifers from core-top sediments of Gullmar Fjord, Swedish West coast (Version 1) [Data set]. Lund University. Available at: <https://doi.org/10.5878/eb67-9v72>

Creator/Principal investigator(s)

[Inda Brinkmann](#) - Lund University

Research principal

[Lund University](#) - Department of Geology, Lund University

Description

Dataset of Ba/Ca in *Bulimina marginata* and *Nonionellina labradorica* (CTG-labelled) acquired by Laser-Ablation Inductively Coupled Mass Spectrometry (LA ICP MS; Department of Geology, Lund University, Lund, Sweden). Comprises data of the three most-recently formed chambers (n, n-1 and n-2), as well as the proloculus area (p; *B. marginata* only). The specimens were collected from core-top samples of two sites in Gullmar Fjord, Swedish West coast, Sweden over a temporal gradient spanning the year 2018 and 2019. The data set is part of a study exploring the response of foraminiferal Ba/Ca to contrasting hydroclimatic conditions. A publication including this data is currently ongoing. Please contact the main author for further details (inda.brinkmann@geol.lu.se).

Gullmar Fjord was sampled in September 2018, February 2019 and June 2019 (R/V Oscar von Sydow and R/V Skagerak, respectively) at GF 117 (115–117 m; 58°19.695'N, 11°33.147'E) and GF 71 (69–71 m; 58°17.116'N, 11°30.546'E). Sediment cores were recovered with a GEMAX® twin-barrel corer (modified Gemini corer, 9 cm diameter, from Oy Kart AB, Finland). The top 1 cm of the cores were collected and CTG-labelled to identify living foraminifera. *Bulimina marginata* and *Nonionellina labradorica* specimens were selected and bleached (NaOCl 5%). Trace element concentrations of test walls were analysed using a Bruker Aurora Elite (quadrupole) ICP-MS and a 193 nm Cetac Analyte G2 excimer laser installed with a two volume HelEx2 sample cell (Dept. of Geology, Lund University, Lund, Sweden). U.S. National Institute of Standards and Technology SRM NIST610 was used as external calibration material with GeoReM (Geological and Environmental Reference Materials; Jochum et al., 2005) composition values (via <http://georem.mpch-mainz.gwdg.de>).

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

2018-09 - 2019-06

Variables

1

Data format / data structure

[Numeric](#)

Data collection 1

- Description of the mode of collection: Laser ablation inductively coupled plasma mass spectrometer (LA ICP MS)
- Instrument: Bruker Aurora Elite (quadrupole) ICP-MS and a 193 nm Cetac Analyte G2 excimer laser installed with a two volume HelEx2 sample cell

Geographic spread

Geographic location: [Sweden](#), [Bohuslän Province](#)

Geographic description: Gullmar Fjord was sampled in September 2018, February 2019 and June 2019 (R/V Oscar von Sydow and R/V Skagerak, respectively) at GF 117 (115–117 m; 58°19.695'N, 11°33.147'E) and GF 71 (69–71 m; 58°17.116'N, 11°30.546'E).

Responsible department/unit

Department of Geology, Lund University

Contributor(s)

Tomas Naeraa - Lund University, Department of Geology

K. Mareike Paul - University of Helsinki, Aquatic Biogeochemistry Research Unit, Ecosystems and Environment Research Program, Faculty of Biological and Environmental Sciences

Magali Schweizer - University of Angers, LPG UMR CNRS 6112

Tom Jilbert - University of Helsinki, Aquatic Biogeochemistry Research Unit, Ecosystems and Environment Research Program, Faculty of Biological and Environmental Sciences

Helena L. Filipsson - Lund University, Department of Geology

Christine Barras - University of Angers, LPG UMR CNRS 6112

Funding 1

- Funding agency: Crafoord Foundation

Funding 2

- Funding agency: Academy of Finland
- Funding agency's reference number: 317684 and 319956

Funding 3

- Funding agency: Royal Physiographic Society of Lund, Sweden

Funding 4

- Funding agency: Swedish Research Council VR

- Funding agency's reference number: 2017-04190

Research area

[Earth and related environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Climate research](#) (Standard för svensk indelning av forskningsämnen 2011)

[Environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Geochemistry](#) (Standard för svensk indelning av forskningsämnen 2011)

[Oceanography, hydrology and water resources](#) (Standard för svensk indelning av forskningsämnen 2011)

Keywords

[Coastal](#), [Atmospheric/ocean indicators](#), [Barium](#), [Trace element](#), [Benthic foraminifera](#), [Marine ecosystem](#), [Biogeochemistry](#)

Publications

Brinkmann, I., Barras, C., Jilbert, T., Næraa, T., Paul, K.M., Schweizer, M. & Filipsson, H.L. (2022). Drought recorded by Ba/Ca in coastal benthic foraminifera. *Biogeosciences*, 19(9), 2523–2535.

<https://doi.org/10.5194/bg-19-2523-2022>

DOI: <https://doi.org/10.5194/bg-19-2523-2022>

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

11.311798095703, 58.504457242629

11.311798095703, 58.209067572956

11.782836914062, 58.209067572956

11.782836914062, 58.504457242629

11.311798095703, 58.504457242629

Accessibility level

Access to data through SND

Data are freely accessible

Use of data

[Things to consider when using data shared through SND](#)

License

[CC BY-NC 4.0](#)

Versions

Version 1. 2022-03-29

Homepage

<https://www.geology.lu.se/inda-brinkmann>

Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CLS\)](#)

[File overview \(CSV\)](#)

Published: 2022-03-29

Last updated: 2023-03-21