Organic contaminant measurements of the water samples collected from West Florida Shelf onboard R/V Hogarth and R/V Weatherbird II (2022–2023), following Hurricane Ian

Website: https://www.bco-dmo.org/dataset/990455
Version: 1
Version Date: 2025-12-11

Abstract
This dataset includes a comprehensive suite of water-quality parameters, including alkalinity, organic alkalinity, dissolved inorganic carbon (DIC), short-lived radium isotopes (223Ra and 224Ra), stable isotopes (^13C and ^15N), dissolved organic carbon, and a broad range of organic contaminants (PAHs, alkanes, organochlorides, thiolates, PCBs, insecticides, pesticides, and herbicides). Samples were collected aboard the R/V Hogarth and R/V Weatherbird II during cruises in October 2022, January 2023, and March 2023 as part of the NSF RAPID (OCE-2309659) project following Hurricane Ian.

Table of Contents

- Coverage
- Dataset Description
  - Methods & Sampling
- Related Publications
- Related Datasets
- Parameters

Coverage

Location: Southwest Florida Shelf
Spatial Extent: **N**:27.44205 **E**:-81.74894 **S**:25.89909 **W**:-82.71008
Temporal Extent: 2022-10-18 - 2023-10-23

Methods & Sampling

Water samples were collected using a CTD rosette and processed for the analysis of organic contaminants following standard EPA protocols and previously published methods (Adhikari et al., 2017, 2019; Romero, 2018). Physicochemical parameters were measured with a YSI EXO II multiparameter water-quality sonde (SKU#: 599502-02) attached to the ship's CTD rosette. The samples collected in Niskin bottles were filtered onto pre-baked GFF filters (0.7 µm), and the filters were stored frozen for particulate organic contaminant analysis. The samples were solvent-extracted and analyzed at the University of South Florida (using modified EPA methods; Romero, 2018) with Gas Chromatography Triple Quadrupole Mass Spectrometry (GC-MS/MS).

[table of contents | back to top]

Related Publications

Adhikari, P. L., Wong, R. L., & Overton, E. B. (2017). Application of enhanced gas chromatography/triple quadrupole mass spectrometry for monitoring petroleum weathering and forensic source fingerprinting in samples impacted by the Deepwater Horizon oil spill. Chemosphere, 184, 939–950. https://doi.org/10.1016/j.chemosphere.2017.06.077
Methods

Romero, I. C. (2018). A High-Throughput Method (ASE-GC/MS/MS/MRM) for Quantification of Multiple Hydrocarbon Compounds in Marine Environmental Samples. Marine Technology Society Journal, 52(6), 66–70. https://doi.org/10.4031/mtsj.52.6.6
Methods

[table of contents | back to top]

Related Datasets

IsRelatedTo

Adhikari, P., Romero, I. C., Chen, H. (2025) **Physicochemical parameters, nutrients, radium and stable Isotopes, carbonate chemistry & organic alkalinity measurements from the West Florida Shelf, collected onboard R/V Hogarth and R/V Weatherbird II (2022–2023), following Hurricane Ian.** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 1) Version Date 2025-12-11 http://lod.bco-dmo.org/id/dataset/990457 [view at BCO-DMO]

[table of contents | back to top]

Parameters

Parameters for this dataset have not yet been identified

[table of contents | back to top]