Publishing data in the EarthChem Library

24 April 2014

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www.earthchem.org/library

IEDA

EarthChem

NSF

EarthChem Library

- Data repository for geochemical data and related data types
- Operated as part of IEDA (Integrated Earth Data Applications)
  - Sustainable funding through a Cooperative Agreement with NSF Formal
  - Community governance & guidance
  - Disciplinary expertise
  - Professional data management policies & procedures
    - Rigorous risk management
    - Persistent identification of data & samples (DOI, IGSN)
    - Long-term archiving agreements with National Geophysical Data Center & Columbia University Libraries
    - Cross-referencing with publishers, data citation index, etc.
  - Member of World Data Systems

EarthChem Library

Library Menu

- Library Home
- Browse
- Search
- Submit
- Data Templates
- My EarthChem Library
- Library Help
- How to Cite Data
- Disclaimer

EarthChem Library

The EarthChem Library is a data repository that archives, publishes and makes accessible data and other digital content from geoscience research (analytical data, data syntheses, models, technical reports, etc.).

Open Access

Access to data in the EarthChem Library is open and free for use under the terms of the Creative Commons license BY-NC-SA 3.0.

Long-Term Archive

The EarthChem Library guarantees long-term availability of its content through collaboration with the Columbia University Libraries Digital Program.

Data Registration with DOI

Datasets in the Library can be identified, shared, published and cited by using a Digital Object Identifier (DOI). The EarthChem Library is part of IEDA, a publication agent with the DataCite consortium.

Data Submission

The EarthChem Library offers online data submission. If you want to submit data to the Library, please check the EarthChem Library Submission Guidelines document. Access to submitted datasets can be restricted for a period of up to 2 years, set by the contributor of the dataset.

NSF Investigator Support

Datasets submitted to the EarthChem Library can be linked to NSF award numbers upon submission. Investigators can use the IEDA Data Compliance Report tool to prepare reports about submitted datasets to demonstrate compliance with NSF Data Policies.

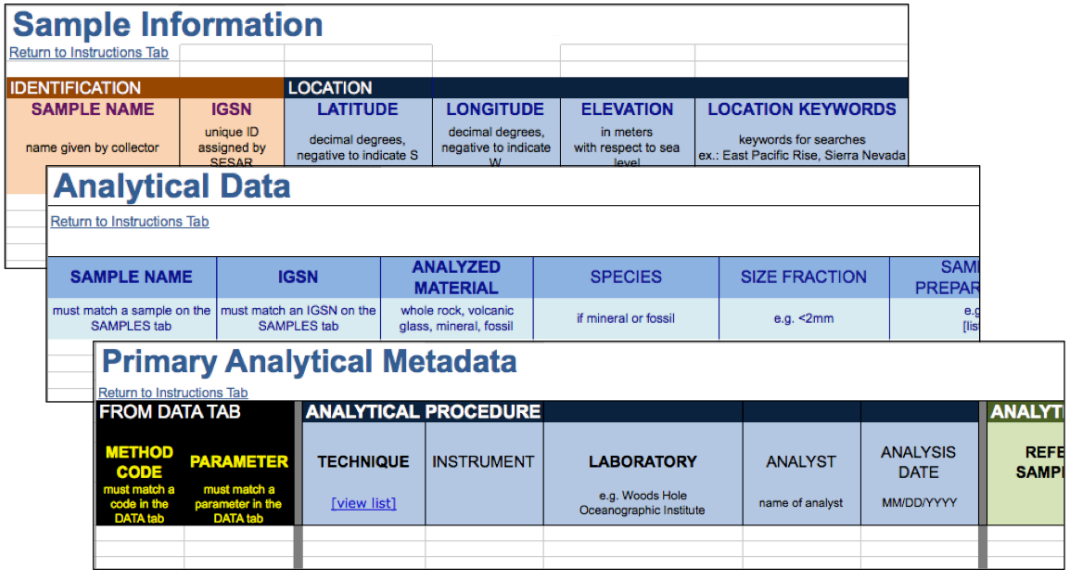
See the full **IEDA EarthChem Data Publication Policy** here.

Requirements for the Publication of Geochemical Data

(Editors Roundtable document, 2009, doi:10.1594/IEDA/100426)

- Data Accessibility and Format
  - New geochemical data should be made available for future use
- Data Quality Information
  - Analytical process and reproducibility of measurements
  - Correction procedures
  - Analytical technique, lab, values measured on reference materials
- Sample Information
  - Location
  - Classification (lithology or species)
  - Global unique identifiers

EarthChem Data Templates



Sample Information

Return to Instructions Tab

IDENTIFICATION		LOCATION			
SAMPLE NAME	IGSN	LATITUDE	LONGITUDE	ELEVATION	LOCATION KEYWORDS
name given by collector	unique ID assigned by SESAR	decimal degrees, negative to indicate S	decimal degrees, negative to indicate W	in meters with respect to sea level	keywords for searches ex.: East Pacific Rise, Sierra Nevada

Analytical Data

Return to Instructions Tab

SAMPLE NAME	IGSN	ANALYZED MATERIAL	SPECIES	SIZE FRACTION	SAMI PREPAR
must match a sample on the SAMPLES tab	must match an IGSN on the SAMPLES tab	whole rock, volcanic glass, mineral, fossil	if mineral or fossil	e.g. <2mm	e.g [lis

Primary Analytical Metadata

Return to Instructions Tab

FROM DATA TAB		ANALYTICAL PROCEDURE					ANALYT
METHOD CODE must match a code in the DATA tab	PARAMETER must match a parameter in the DATA tab	TECHNIQUE [view list]	INSTRUMENT	LABORATORY e.g. Woods Hole Oceanographic Institute	ANALYST name of analyst	ANALYSIS DATE MM/DD/YYYY	REFE SAMPI

Data templates are available for various data types:

- Bulk elemental analyses
- Bulk isotope analyses
- In situ mineral analyses
- In situ melt inclusion analyses

The templates are available at
http://www.earthchem.org/data/templates

For more information or comments, email
info@earthchem.org

What additional data templates or fields are needed for CZO data?

Submitting data to the EarthChem Library

ECL descriptive metadata for the dataset includes

- **Dataset information** (title, authors, data types, keywords, related publications)
- **Spatial coverage information**
- **Release date** – a release date in the future can be chosen

- www.earthchem.org/library
- http://www.earthchem.org/ecltour

Submitting a dataset

Dataset Information

Dataset Title *

Dataset Language English

Dataset Type Collection See Definitions

Lead Author *

[+ Add New Author]

Use the dropdown list below to select the Lead Author OR add a new one by selecting the provided link on the lefthand side.

-- Select Lead Author --

Co-Author(s)

[+ Add]

The order presented below will be displayed in the published record after the lead author. The maximum number of Co-Authors allowed is 15.

First Name | Middle Initial | Last Name

Abstract or Description *

Enter a 3 to 5 sentence description of the dataset.
Describe measurements, location, and purpose of the dataset.

Data Type(s) *

Select one or more data types.

- Chemistry
- Chemistry:Rock
- Chemistry:Sediment
- Chemistry:Fluid
- Chemistry:Gas
- Geochronology
- Kinetics
- ModelData
- Other
- Petrography
- Petrology
- Petrology:Mineral
- Petrology:Experimental
- SampleInfo

A published dataset

Dataset Information

Basic Information

Dataset Title	**Susquehanna Shale Hills Critical Zone Observatory Porewater Chemistry (2010)**
Author(s)	**Brantley, Susan L.; Bazilevskaya, Ekaterina; Andrews, Danielle; Williams, Jennifer Z.; Herndon, Elizabeth; Holmes, George; Bhatt, Maya; Holleran, Molly; Yesavage, Tiffany; Thomas, Evan; Sullivan, Pamela L.**
Dataset DOI	doi:10.1594/IEDA/100237
Date Released/Published	02/05/2013
Abstract/Description	Soil water chemistry collected from nested-suction lysimeters (Soil water samplers, 1900 series, SoilMoisture Equipment Corp., Santa Barbara, CA) along two South (S) and two North (N) transects with one Planar (P) and Swale (S) hillsope within each group in the Susquehanna Shale Hills Critical Zone Observatory in 2010. Lysimeter nests were located at three different positions along the hillslope elevational gradient; with the most elevated site located at the Ridge Top (RT) followed by the Mid Slope (MS) and lowest site at the Valley Floor (VF). As the lysimeters were installed to the depth of augering refusal, first lysimeters were installed at a depth 10 cm with subsequent lysimeters installed every 10 cm.
Citation	Brantley, Susan L.; Bazilevskaya, Ekaterina; Andrews, Danielle; Williams, Jennifer Z.; Herndon, Elizabeth; Holmes, George; Bhatt, Maya; Holleran, Molly; Yesavage, Tiffany; Thomas, Evan; Sullivan, Pamela L. (2013): Susquehanna Shale Hills Critical Zone Observatory Porewater Chemistry (2010). EarthChem Library. http://dx.doi.org/10.1594/IEDA/100237

Data Type(s)	Chemistry:Fluid
Subject/Keywords	Soil water geochemistry, major ions, DOC, trace elements, catchment, hillslope, ridge top, valley floor
Dataset Language	English
Dataset Type	Dataset

Related Publication(s) (citation)	Jin, L., Andrews, D.M., Holmes, G.H., Lin, H., and Brantley, S.L.(2011)."Opening the "Black Box": Water Chemistry Reveals Hydrological Controls on Weathering in the Susquehanna Shale Hills Critical Zone Observatory." Vadose Zone Journal, 10:928-942.
Primary Publication DOI	doi:10.2136/vzj2010.0133
Related Funding Award(s)	0725019

What can you do with ECL datasets

- Share and Cite your datasets
  - Use the dataset DOI to share and cite your data in publications or online
- MyECL
  - Manage your published or pending datasets
  - www.earthchem.org/library/my
- Browse CZO-related data
  - See other datasets from CZOs in the ECL
  - http://www.earthchem.org/library/browse/czo
- Generate a report of your data in EarthChem
  - In PDF or HTML form, demonstrate data publication for a specific NSF award number
  - http://www.iedadata.org/compliance/report

CZO and ECL: Data Types

What additional data types are needed for CZO data?

- Chemistry
- Chemistry:Rock
- Chemistry:Sediment
- Chemistry:Fluid
- Chemistry:Gas
- Geochronology
- Kinetics
- ModelData
- Other
- Petrography
- Petrology
- Petrology:Mineral
- Petrology:Experimental
- SampleInfo

EarthChem Library Links

- www.earthchem.org/library
- http://www.earthchem.org/ecltour
- http://www.earthchem.org/data/templates
- http://www.earthchem.org/resources/vocabularies
- http://www.earthchem.org/editors

- Email comments or questions to info@earthchem.org
  - What additional data templates or fields are needed for CZO data?
  - What additional data types are needed for CZO data?