Molecular Observation Network (MONet) V.2

maggie.bowman[1], Alexis Heath[1], Tamas Varga[1], Anil Battu[1], Will Kew[1], Cheng Shi[1], Rosey Chu[1], Che Clendinen[1], Odeta Qafoku[1], Jason.Toyoda[1], qian.zhao[1], izabel.stohel[1], Rey Hauchambe[1], Michael Rosenstock[2], Albert Lawver[2], nicholas.sconzo[1], James Anderson[1], Patricia Miller[1], andrew.townsend[1], Nancy Hess[1], John Bargar[1], emily.graham[2]

[1]Environmental Molecular Sciences Laboratory;
[2]Pacific Northwest National Laboratory

nicholas.sconzo

VERSION 2

MAR 22, 2023

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.5jyl8jr49g2w/v2

Collection Citation: maggie.bowman, Alexis Heath, Tamas Varga, Anil Battu, Will Kew, Cheng Shi, Rosey Chu, Che Clendinen, Odeta Qafoku, Jason.Toyoda, qian.zhao, izabel.stohel, Rey Hauchambe, Michael Rosenstock, Albert Lawver, nicholas.sconzo, James Anderson, Patricia Miller, andrew.townsend, Nancy Hess, John Bargar, emily.graham 2023. Molecular Observation Network (MONet). **protocols.io** https://dx.doi.org/10.17504/protocols.io.5jyl8jr49g2w/v2Version created by sarah.leichty

Protocol status: Working
We use this collection and it's working

Created: Mar 22, 2023

ABSTRACT

EMSL is leading the effort to develop a national network of environmental sampling and sensing sites to produce comprehensive molecular-level information on the composition and structure of soil, water, and resident microbial communities required to advance the span and accuracy of multiscale models of Earth systems. Through the Molecular Observation Network (MONet), EMSL will collaborate with a broad range of partners managing an expanding network of selected natural, urban, and managed watershed, coastal, continental, and atmospheric sites, both experimental and observational.

To establish MONet for the Biological and Environmental Research user community, research will focus on seven areas. Research focused under current development include:

- Establishing the supporting field and experimental networks,
- Advancing methods for model–data exchange and multiscale modeling,
- Automating organic matter and soil analysis,
- Developing the next generation of rhizosphere sensors and other field sensors for plants, microbes, nutrients, biomarkers, and aerosols.

The data and models generated through MONet will improve prediction of ecosystem function and response to disturbances, supporting the long-term U.S. Department of Energy goal of scientifically informed decision-making regarding the nation's energy and environmental security and sustainability.

For more information please visit: https://www.emsl.pnnl.gov/monet

Last Modified: Mar 22, 2023

COLLECTION integer ID:
79253

FILES

Protocol

NAME
Field Sampling Protocol

VERSION 1

CREATED BY
nicholas.sconzo

OPEN →

Protocol

NAME
Core Receiving and Splitting

VERSION 1

CREATED BY
nicholas.sconzo

OPEN →

Protocol

NAME
Gravimetric Water Content (GWC)

VERSION 1

CREATED BY
nicholas.sconzo

OPEN →

Protocol

NAME
Soil pH 1:1 Soil Water Ratio

VERSION 1

CREATED BY
nicholas.sconzo

OPEN →

Protocol

NAME

Sequential Microbial Biomass and Nitrogen Extraction

VERSION 1

CREATED BY

nicholas.sconzo

OPEN →

Protocol

NAME

Phosphorus Extraction - Olsen Method

VERSION 1

CREATED BY

nicholas.sconzo

OPEN →

Protocol

NAME

Phosphorus Extraction - Bray Method

VERSION 1

CREATED BY

nicholas.sconzo

OPEN →

Protocol

NAME

Water Extractable Organic Matter (WEOM)

VERSION 1

CREATED BY

nicholas.sconzo

OPEN →

Protocol

NAME

DNA Extraction

VERSION 1

CREATED BY

izabel.stohel

OPEN →