

## Anti-Icing Chemical Spectral Data (Phase 1: Laboratory) Dataset

Dataset available at: <https://doi.org/10.7910/DVN/WRLVZJ>

(This dataset supports report **Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals by Using In-Situ Spectral Data – Phase II**)

This U.S. Department of Transportation-funded dataset is preserved by the Pacific Northwest Transportation Consortium (PacTrans) in the digital repository Harvard Dataverse (<https://dataverse.harvard.edu>), and is available at <https://doi.org/10.7910/DVN/WRLVZJ>

The related final report **Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals by Using In-Situ Spectral Data – Phase II**, is available from the National Transportation Library's Digital Repository at <https://rosap.ntl.bts.gov/view/dot/60061>.

### Metadata from the Harvard Dataverse Repository record:

Dataset Persistent ID: doi:10.7910/DVN/WRLVZJ

Publication Date: 2020-06-24

Title: Anti-Icing Chemical Spectral Data (Phase 1: Laboratory)

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Description: Samples were generated in a lab to simulate field conditions of different concentrations of anti-icing brine-based chemical and anti-icing beet-brine mixtures used by the Alaska Department of Transportation and Public Facilities. Spectral data was collected in the University of Alaska Fairbanks (UAF) Hylab using a PSR+ 3500 hyperspectrometer with a range from 350 nm to 2500 nm wavelengths and a halogen lamp to mimic the spectrum and consistency of intensity that natural sunlight outputs. (2019-02-19)

Subject: Earth and Environmental Sciences; Engineering; Computer and Information Science

Keyword: anti-icing, transportation, winter maintenance, reflectance, hyperspectral, spectral

Notes: <http://hdl.handle.net/1773/46932> The amount of data from project exceeds the storage capacity. For a complete set of the data please email :pactrans@uw.edu

Depositor: Yarbrough, Christina

Deposit Date: 2020-06-24

### Recommended citation:

Belz, Nathan, 2020, "Anti-Icing Chemical Spectral Data (Phase 1: Laboratory)", <https://doi.org/10.7910/DVN/WRLVZJ>, Harvard Dataverse, V2

### Dataset description:

This dataset contains 1 file collection, listed below.

### Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals\_Data.zip

This file collections contains 1,468 files. The file types associated with these files are listed below.

- The .r file type is related to R programming language. R is a language and environment for statistical computing and graphics (for more information on .r files and software, please visit <https://www.file-extensions.org/r-file-extension>).
- The .txt file type is a common text file, which can be opened with a basic text editor. The most common software used to open .txt files are Microsoft Windows Notepad, Sublime Text, Atom, and TextEdit (for more information on .txt files and software, please visit <https://www.file-extensions.org/txt-file-extension>).
- The .xlsx and .xls file types are Microsoft Excel files, which can be opened with Excel, and other free available software, such as OpenRefine.
- The .rtf file type is used for documents written in Rich Text Format, a text format with some very basic formatting preserved. The .rtf format stores data in plain ASCII text file with additional formatting commands somewhat similar to HTML files (for more information on .rtf files and software, please visit <https://www.file-extensions.org/rtf-file-extension>).
- The .raw file type is traditionally used for RAW image format, a picture format used by digital cameras for "raw" images take by the device that are not yet processed to for use. These files are sometimes also called digital negatives, because they serve same purpose as negatives in film photography (for more information on .raw files and software, please visit <https://www.file-extensions.org/raw-file-extension>).
- The .sed file type is associated with the SED (streams editor), a command line utility included in Unix and Unix-based operating systems, that allows users to modify and filter texts (for more information on .sed files and software, please visit <https://www.file-extensions.org/sed-file-extension>).
- The .jpg file extension is associated with JPEG (Joint Photographic Experts Group) file format. JPEG is a lossy image compression algorithm that significantly reduces the file size of the original image at the cost of quality. The higher the compression ratio the lower the quality of the .jpg file (for more information on .jpg files and software, please visit <https://www.file-extensions.org/jpg-file-extension>).

**National Transportation Library (NTL) Curation Note:**

As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (<https://doi.org/10.21949/1503647>) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset. NTL staff last accessed this dataset at <https://doi.org/10.7910/DVN/WRLVZJ> on 2022-05-03 If, in the future, you have trouble accessing this dataset at the host repository, please email [NTLDataCurator@dot.gov](mailto:NTLDataCurator@dot.gov) describing your problem. NTL staff will do its best to assist you at that time.