

Data title=

Stable oxygen and hydrogen isotope values from surface water collected near Toolik Lake, Alaska

PI/Data Contact=

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Data coverage=

Data collected in 2009 and 2010

Project funded by=

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Dataset Overview=

This includes stable oxygen and hydrogen isotope values measured from surface water samples collected from Trevor Creek and Oksrukuyik Creek near Toolik Lake Field Station Alaska.

Platform ID=

N/A

Instrument Description=

Wavelength-Scanned Cavity Ringdown Spectroscopy on a Picarro L2120i (Sunnyvale, California)

Location=

Oksrukuyik Creek 200 meters upstream from where it crosses the Dalton Highway:
68.68623 North latitude, 149.09649 West longitude
UTM 414969N, 7620645W

Trevor Creek 200 meters upstream from where it crosses the Dalton Highway:

68.28391 North latitude, 149.36390 West longitude
UTM 402406N, 7576207W

Data Remarks=

All values are presented in per mil values based on SMOW-GISP-SLAP calibration

Time stamp=

Times are in Alaska Standard time (AST) and UTC

Stamp is YYYY/MM/DD/HH

Where YYYY=Year, MM= Month, DD=Day, HH=hour

Such that April 28, 2010 at 10am would be: 2010/04/28/10

Field procedures=

Samples were filtered through acid washed 0.45 μm polypropylene filters in the field.

Samples were collected into 60 mL high density polyethylene bottles and were stored away from light until they were analyzed.

Analytical Procedures=

Samples for stable isotope analyses were filtered through acid-washed 0.45- μm polypropylene filters. Stable isotopes of oxygen and hydrogen were measured using Wavelength-Scanned Cavity Ringdown Spectroscopy on a Picarro L2120i (Sunnyvale, California). Each standard and sample was injected into the analyzer for seven separate analyses. Results from the first four injections were not used to calculate the stable isotope values to ensure there was no internal system memory. The mean value from the final three sample injections was used to calculate the mean and standard deviation value for each sample. Repeated analyses of four internal laboratory standards representing a range of values greater than the samples analyzed and analyses of SMOW, GISP, and SLAP standards (International Atomic Energy Agency) were used to calibrate the analytical results. Based on thousands of these standards analyses and of sample duplicate analyses we estimate the precision is $<0.1\text{‰}$ for $\delta^{18}\text{O}$ and $<0.5\text{‰}$ for δD .