

Water Sciences Laboratory
Analyte/Protocol Price List
2022



**Nebraska
Water Center**
 Daugherty Water for Food Global Institute

IRMS :: Solids

Nebraska Water Center, a part of the
Robert B. Daugherty Water for Food Global Institute at the University of Nebraska
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| Protocol | Analyte | Reporting Limit | Protocol Cost | NU Cost (20% discount) |
|---|--------------------------|-----------------|---------------|------------------------|
| <p>$\delta^{18}O$ in extracted water from soils Protocol ID: 12_01_02_01</p> <p style="border: 1px solid black; padding: 2px;">Minimum elemental mass required for analysis = 1,000 mg</p> <p>Sample Container: 125 mL wide mouth amber glass bottle Sample Size: 50 gm Preservation: Cool, < 6°C Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: Wassenaar, L. I.; Koehler, G. (1999), "An On-Line Technique for the Determination of the $\delta^{18}O$ and $\delta^{17}O$ of Gaseous and Dissolved Oxygen", <i>Anal. Chem.</i> 71, 4965-4968.</p> | $\delta^{18}O$ (‰) | | \$34.60 | \$27.68 |
| <p>$\delta^{13}C$ (organic) isotopes in soils Protocol ID: 12_02_02_11</p> <p style="border: 1px solid black; padding: 2px;">Minimum elemental mass required for analysis = 0.05 mg-C</p> <p>Sample Container: 125 mL polyethylene bottle Sample Size: 1 g Preservation: Frozen Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: Meier-Augenstein, Wolfram (2004), "GC and IRMS Technology for ^{13}C and ^{15}N Analysis on Organic Compounds and Related Gases", <i>Handbook of stable isotope analytical techniques</i> 1, 153.</p> | %C $\delta^{13}C$ (‰) | | \$23.10 | \$18.48 |

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| <p>$\delta^{13}\text{C}$ isotopes in organic solids</p> <p>Protocol ID: 12_02_08_03</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>Minimum elemental mass required for analysis = 0.05 mg-C</p> </div> <p>Sample Container: 125 mL polyethylene bottle Sample Size: 10 grams Preservation: Frozen Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: Meier-Augenstein, Wolfram (2004), "GC and IRMS Technology for ^{13}C and ^{15}N Analysis on Organic Compounds and Related Gases", <i>Handbook of stable isotope analytical techniques</i> 1, 153.</p> | <p>%C $\delta^{13}\text{C}$ (‰)</p> | | <p>\$16.80</p> | <p>\$13.44</p> |
| <p>Deuterium in extracted water</p> <p>Protocol ID: 12_04_02_02</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>Minimum elemental mass required for analysis = 1,000 mg</p> </div> <p>Sample Container: 125 mL polyethylene bottle Sample Size: 20 mL Preservation: Cool, < 6°C Holding Time: 180 Days Estimated Turnaround Time: 6-8 Weeks</p> | <p>2H</p> | | <p>\$34.60</p> | <p>\$27.68</p> |
| <p>$\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ in NO_3^- in sediment by azide reduction</p> <p>Protocol ID: 12_06_02_07</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>Minimum elemental mass required for analysis = 0.00005 mg-N</p> </div> <p>Sample Container: 125 mL wide mouth amber glass bottle Sample Size: 100 mL Preservation: Frozen Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference:</p> | <p>$\delta^{15}\text{N}$ $\delta^{18}\text{O}$</p> | | <p>\$115.50</p> | <p>\$92.40</p> |

Turnaround times are subject to existing sample queues Reporting Limits are subject to verification

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|---|---------|-----------------|---------------|------------------------|
| <p>McIlvin, Matthew R.; Altabet, Mark A. (2005), "Chemical conversion of nitrate and nitrite to nitrous oxide for nitrogen and oxygen isotopic analysis in freshwater and seawater", <i>Anal. Chem.</i> 77, 5589-5595.</p> | | | | |