

XIII. Radioactive Materials

Section XIII of the 2000-2001 season plans lists the radioactive materials to be used and provides information regarding their form, nuclide, site, and specific use.

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BP-016-O	¹⁴ C	¹⁴ C - Sodium bicarbonate	Palmer Station; R/V LAURENCE M. GOULD	Palmer Station/LM GOULD: LTER on the Antarctic Marine Ecosystem: An Ice Dominated Environment - Phytoplankton Ecology Component
BO-025-O	¹⁴ C ³ H ³⁵ S	¹⁴ C - Bicarbonate Acetate ³ H - Thymidine ³⁵ S - DMSP	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BO-037-O	³⁵ S	³⁵ S - L-methionine and L-cysteine mix	Palmer Station	Structure, Function, and Expression of Cold-Adapted Tubulins and Microtubule- Dependent Motors from Antarctic Fishes
BM-042-P	¹⁴ C ³ H	¹⁴ C - Bicarbonate ³ H - Thymidine	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BM-042-V	¹⁴ C	¹⁴ C - Sodium Bicarbonate	McMurdo Station	McMurdo Dry Valleys: A Cold Desert Ecosystem

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BM-042-W	¹⁴ C -	¹⁴ C - Sodium Bicarbonate	McMurdo Station	McMurdo Dry Valleys: A Cold Desert Ecosystem
BP-046-O	³ H ¹⁴ C ¹⁴ C ¹⁴ C ³ H	³ H - Leucine ¹⁴ C - Bicarbonate ¹⁴ C - Glucose ¹⁴ C - Acetate ³ H - Thymidine	R/V LAURENCE M. GOULD	ILTER: Microbiology and carbon flux
BO-197-O	³² P	³² P - UTP	McMurdo Station	Diving Biology of Emperor Penguins
BO-200-O	³ H	³ H - Leucine ³ H - Thymidine	R/V NATHANIEL B. PALMER	Determination of bacteria plankton response to UV radiation in the Weddell Sea and Palmer Station LTER grid.
OO-257-O	⁶³ Ni	⁶³ Ni - Foil or Plated source	South Pole Station	South Pole Monitoring for Climatic Change: U.S. Department of Commerce; National Oceanic and Atmospheric Administration, Climate Monitoring and Diagnostics Laboratory (Source is inside an electron capture detector of a gas chromatograph)
OO-270-O	⁶³ Ni	⁶³ Ni	South Pole	An Investigation of Sulfur Chemistry in the Antarctic Troposphere (ISCAT)

PROJECT	NUCLIDE	FORM	SITE	USE
BO-301-O	³⁵ S ¹⁴ C ³² P ³ H	³⁵ S - Methionine ¹⁴ C - Amino Acids ³² P - Nucleic Acids ³ H - Amino Acid	McMurdo Station	Metabolic studies of various Antarctic organisms
BO-310-O	³ H	³ H - Thymidine	McMurdo Station	Determination of Dry Valley Lake Organisms
BO-313-O	³⁵ S	³⁵ S - Sulfur	R/V LAURENCE M. GOULD	Determination of Southern Ocean Sulfate Bacteria
GLOBEC/ Vernet	¹⁴ C	¹⁴ C - Sodium Bicarbonate	R/V NATHANIEL B. PALMER	Global Ocean Ecosystem Dynamics