XIII. Radioactive Materials

Section XIII of the 1997-98 season plans lists the radioactive materials to be used and provides information regarding their form, nuclide, site, and specific use.

PROJECT	NUCLIDE	FORM	SITE	USE
S-006	^{3}H ^{14}C ^{14}C ^{35}S ^{86}Rb $^{32}P/^{33}P$	^{3}H - Uridine ^{14}C - ATP ^{14}C - Alanine ^{35}S - Methionine ^{86}Rb - Rubidium Chloride $^{32}P/^{33}P$ - Deoxycytidine 5'-triphosphate salt	McMurdo Station/Sea Ice	Metabolic physiology during embryonic and larval development of Antarctic echinoderms
S-010	^{14}C	^{14}C - Sodium Bicarbonate	Palmer Station	New approaches to Measuring and Understanding the Effects of Ultraviolet Radiation on Photosynthesis by antarctic Phytoplankton
S-016	^{14}C	^{14}C - Sodium bicarbonate	Palmer Station; R/V L.M.GOULD	Palmer Station/LM Gould: LTER on the Antarctic Marine Ecosystem: An Ice Dominated Environment - Phytoplankton Ecology Component

PROJECT	NUCLIDE	FORM	SITE	USE
S-042P	^{3}H ^{14}C	^{3}H - Thymidine ^{14}C -Carbonate - Bicarbonate	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
S-046	^{3}H ^{14}C	^{3}H - Leucine ^{14}C - Sodium Bicarbonate	R/V L.M. GOULD	LTER: Microbiology and carbon flux
S-109D	^{241}Am	^{241}Am - Metal Disk	South Pole Station	South Pole Air Shower Experiment (SPASE)-2
S-116	^{60}Co ^{133}Ba ^{154}Eu composite	^{60}Co - sealed source ^{133}Ba - sealed source ^{154}Eu - sealed source composite - sealed source	McMurdo Station	Astrophysical Gamma-Ray Spectroscopy with the High Resolution Gamma-Ray and Hard X-ray Spectrometer (HIREGS) on Long Duration Balloon Flights
S-171	^{208}Po	^{208}Po - Acetate	McMurdo Station	Reconstruction of Paleotemperatures from precision bore hole temperature logging: a Transantarctic Mountains Transect from Taylor Dome to Ross Sea
S-211	^{233}Pa	^{233}Pa - Nitric Acid	R/V ROGER REVELLE	U.S. JGOFS Antarctic Environment and Souther Ocean Process Study - Coring and water column studies of paleproductivity proxies
S-216B	^{3}H	^{3}H - Leucine	R/V NATHANIEL B. PALMER	Research on Ocean-Atmosphere Variability in Ecosystem Response in the Ross Sea (ROAVERRS)

PROJECT	NUCLIDE	FORM	SITE	USE
S-216C	^{3}H ^{14}C	^{3}H - Leucine ^{14}C - Thymidine	R/V NATHANIEL B. PALMER	Research on Ocean-Atmosphere Variabaility and Ecosystem Response in the Ross Sea (ROAVERRS)
S-223	^{14}C	^{14}C - Sodium ^{14}C - Bicarbonate	R/V NATHANIEL B. PALMER; Ross Sea	NBP/REVELLE: Carbon and Nitrogen in Dissolved Organics: A Contribution to the U.S. JGOFS Southern Ocean Program I
S-231	^{14}C	^{14}C - Sodium Bicarbonate	R/V ROGER REVELLE	Primary Production in the Southern Ocean: APFZ Process I on REVELLE
S-232	^{14}C	^{14}C - Sodium Bicarbonate	R/V ROGER REVELLE	Primary Production in the Southern Ocean: Polar Front Process Study 2
S-233	^{3}H ^{3}H ^{14}C	^{3}H - Leucine ^{3}H - Thymidine ^{14}C - Sodium Bicarbonate	R/V NATHANIEL B. PALMER; Ross Sea	NBP: Primary Production in the Southern Ocean: PROCESS STUDY IV
S-243	^{3}H	^{3}H - aqueous disolved organic compounds	R/V NATHANIEL B. PALMER; Ross Sea	Bacterial production uncoupled from primary production: Implications for carbon cycling in the southern ocean.
S-244	^{3}H	^{3}H - aqueous, dissolved organic compounds	R/V NATHANIEL B. PALMER; Ross Sea	Bacterial production uncoupled from primary production: Implications for carbon cycling in the southern ocean.

PROJECT	NUCLIDE	FORM	SITE	USE
S-245	^{3}H ^{55}Fe	^{3}H - aqueous, dissolved organic compounds ^{55}Fe - ferric chloride	R/V NATHANIEL B. PALMER; Ross Sea	Bacterial production uncoupled from primary production: implications for DOM fluxes in the Southern Ocean (U.S. JGOFS)
S-257A	^{63}Ni	^{63}Ni - Foil or Plated source	South Pole Station	South Pole Monitoring for Climatic Change: U.S. Deparment of Commerce; National Oceanic and Atmospheric Administration, Climate Monitoring and Diagnostics Laboratory (Source is inside an electron capture detector of a gas chromatograph)