UNOLS SWAB Program

- Operation SWAB was developed to help protect background ^{14}C and ^{3}H measurements from contamination. It is run by the University of Miami's Tritium Laboratory. It was also set up to protect the NOSAMS facility from contamination.

- These isotopes are frequently used in radio-labeling experiments conducted by biologists, at concentrations at least 10^{6} greater than background concentrations.

Background ^{3}H and ^{14}C concentrations are useful to study ocean circulation patterns and background ^{14}C can also be used for primary productivity studies

Even small amounts of ^{14}C and ^{3}H from the labeling experiments inadvertently spilled on a ship have the potential to adversely affect background measurement of these isotopes.

Samples are collected from a 1 m^2 area using a water/count-off (radiological soap) mixture.

Collected samples are centrifuged to remove suspended solids and then counted on a low-background LSC.

- Samples are collected and analyzed by a lab that has no stake in whether or not contamination is present. Reports of the results are delivered to the ship operators and scientists involved.
- A SWAB test should be performed on the ship and Rad Van after every cruise where ^{14}C or ^{3}H is used.
- There is no direct cost to the operating institution for a SWAB test.

Please visit: http://www.rsmas.miami.edu/groups/tritium and click on the SWAB Tab for more info,

or contact PI Jim Happell at: (jhappell@rsmas.miami.edu, 305-421-4111) to schedule a SWAB test.