



Technical Support Bulletin 2005-02	Sample Preservative	Aug 30, 2005
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Alert Level: **ADVISORY**

Software Version: All Sediment Trap versions

Instrument: All Sediment Traps

Subject: Sediment Sample Preservative

Summary: Formalin is a popular preservative for oceanic sediment samples. Ultimately, the choice and concentration of preservative for a time-series instrument is a part of science and the final decisions must be made by the user to fit the scientific objective.

Potential Negative Effects: Adding preservative changes the nature of seawater and particulate samples.

Technical Details: Most recently, oceanographers have used buffered formalin -- 2% formalin solution in 3-mill-plus artificial sea water that is buffered to pH 7.1 with Boron -- to preserve non-living particulate matter captured by a time-series sediment trap at the ocean interior (Mesopelagic Zone) for periods up to 18 months:

Among 405 sediment traps deployed on 166 moorings (1984 to present), approximately 75% of the scientists used formalin or formaldehyde as the preservative. Previously, sodium azide solution was popular but is not used now because of a possible azide reaction with metals found in laboratory and shipboard plumbing systems. Mercury chloride solution (about 200 ppm) can be used, but extreme caution is essential due to the high toxicity level.