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General Guidelines for Preparing AMS Samples

Sampling Guidelines

Handling Samples

When handling samples, wear gloves to avoid imparting any carbon or oils from your skin t invite bacteria to grow. Dry the samples in a low temperature oven (50º C). Visually inspec microscope if possible, and remove any material that does not belong.

Containers

Clear glass or plastic vials and jars are preferred. Aluminum foil is not recommended for sa first bake it in a muffle furnace for one hour at 525 degrees Celsius (a carbon residue is lef production). Place well-labelled containers inside individual plastic bags to prevent sample during shipping.

14C Contamination - Hot Samples

A sample with an unnaturally high level of 14C is sometimes called a "hot sample". Hot samples usually result from inadverten container that was previously in contact with radiocarbon tracers. Ways to insure clean, uncontaminated samples are discusse Collection and Handling of Samples for Analysis by AMS]. In addition to compromising your own science, a contaminated sam time for our laboratories as we must rigorously clean or replace any apparatus that the sample came into contact with. In some submitted by other investigators are lost. We must be careful to protect the laboratory and samples from contamination for all i facility.

Please take the time to investigate the history of the laboratory, equipment or vessel where you collect or prepare samples for to us. Samples processed in an unknown lab prior to your obtaining them may be 14C-contaminated. Find out if any work has involving 14C as a tracer (like primary productivity studies). If tracer work is suspected, you may be required to have a swipe s Operation Swab group at University of Miami. The SWAB group routinely tests land-based labs involved in oceanography for g your work is supported by NSF Oceanography there is no direct charge to your lab for such a swipe or swab test. Once gross c out using this less sensitive LSC method, AMS-based swipe tests are required to check for contamination at sufficiently low lev In some cases an initial assessment of your submission may prompt us to request that you submit swipe samples or a bit of na a contamination check. A swipe sample is basically a pre-baked quartz filter that is wetted with alcohol and wiped over a surfac protocol for swipe sampling.

Repeated submission of highly contaminated samples is both costly and damaging. If necessary a fee of $2,500 will be assess time and clean-up.

Define your Samples

We expect submitters to prepare samples which are "ready to analyze". This doesn't mean that we'll handle them mindlessly. \ draw a line between sample definition —the investigator's task— and sample processing. The investigator will always know mo do, and s/he should define the sample by removing as much contamination from a sample as possible (e.g., sediment, quartz g is ample material, by carefully choosing a subsample for AMS analysis. Submit only what you want us to analyze.

Small Samples

whether we may use small sample techniques. Knowing this beforehand will streamline and reduce handling; alternatively leav processing while we seek your decision.

Excess Sample Material

Solid sample material not consumed during analysis is archived at NOSAMS for a two-year period from the date of submission return unused portions, if requested and a shipping account is provided. Please provide this information during the submission

Excess water samples (DIC and DOC) are archived for one month following analysis and then discarded. If you would like the please provide your request and a shipping account during submission through the Web Portal.

Additional Information

General Sampling Guidelines

Contamination Check Sampling Protocol

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