

ANTHROPOLOGY SAMPLING REVIEW COMMITTEE

POLICIES, PROCEDURES AND GUIDELINES

Updated June 1, 2018

SAMPLING REVIEW COMMITTEE:

In 1981, a departmental committee was organized to review requests to analyze items from the Department of Anthropology, National Museum of Natural History. The committee is composed of several curators, the collections manager, a conservator, and the chair of the department. Curators are selected based on the expertise required to properly evaluate individual sampling and casting requests.

SAMPLING AND CASTING REQUEST FORMS:

Anyone wishing to sample or cast an object from the Department of Anthropology, including staff, must submit a formal proposal describing the proposed research methodology, sampling or casting procedure, and expected analytical results. The researcher must also complete a [sampling and casting request form](#), which summarizes the proposal.

Researchers should email both the proposal and the form to the Committee, c/o [Esther Rimer](#).

EVALUATION CRITERIA:

Sampling and casting proposals are evaluated according to the following criteria:

1. The research proposal is sound;
2. The use of Smithsonian collections in lieu of others is justified;
3. The analytical methods proposed should yield the intended results, and are the least intrusive analytical means of obtaining those results;
4. The proposed analyst is qualified to perform the work;
5. The amount of sample and number of items requested is necessary to obtain accurate results;
6. Each item can be safely sampled or cast without damage or defacement or the preclusion of future study or analysis;

7. The degree to which any proposed destructive sampling affects the item is minimal;
8. Samples, if taken, will be returned so they can be retained for future use;
9. Any issues concerning repatriation or cultural affiliation have been addressed (for requests involving Native American collections); and
10. The probability of receiving analytical results from the researcher is high.

DECISION

Proposals are reviewed by the Sampling Review Committee which consists of the curator of the collections to be sampled, a curator with scientific expertise in the sampling procedure, a conservator, a representative of the NMNH Repatriation Program (for all requests to sample Native American collections), and other individuals as needed. The division representative to the Collections Advisory Committee (ethnology, archaeology, physical anthropology) reviews these recommendations and makes a recommendation about the proposal.

Proposals for sampling or casting may be denied or tabled based on the above criteria. Requests are generally tabled if reviewers feel they have insufficient information on which to base a decision. The Sampling Review Committee may request more information, research, or further analysis before a final decision is made. For example, the Sampling Review Committee may stipulate that the requestor obtain plausible results elsewhere before permission to sample or cast NMNH collections is granted. The committee may also modify the proposed sampling or casting methods.

While the review process normally takes 4 weeks, the process may take several weeks longer.

PROCEDURES AND REQUIRED DOCUMENTATION FOR ALL SAMPLING

Unless otherwise specified by the Sampling Review Committee, all researchers must adhere to the following standard procedures:

1. The researcher must photograph and/or adequately document the condition of each object before and after sampling, or prior to casting. Photographs documenting sampling must be of sufficient detail to discern the area that has been sampled. The researcher must send one copy of each photograph, properly labeled, to the Anthropology Conservation Laboratory (ACL) as soon as they are processed;
2. For sampling, the location of each sampling site will be determined by a department conservator and/or curator, unless the Sampling Review Committee has previously specified the location. All samples will be taken under the supervision of a conservator;

3. The size of the sample will not exceed the amount specified by the Sampling Review Committee;
4. Within a year after date of sampling, the researcher must send all analytical results, including raw data if applicable, to Esther Rimer (rimere@si.edu) for permanent storage in the ACL records. All records, except published reports, will be kept confidential, however, the researcher's name may be given to others proposing to use our collections for similar research projects. In this case, the second researcher may be required to obtain analytical results from the first researcher before the latter request is approved.
5. If sampling is not performed within one year of approval, a new request must be submitted.
6. Requests for additional samples or for additional casting for continued research will not be approved by the Sampling Review Committee until #1 and #4 above have been satisfied.
7. Any subsequent publications citing the analysis of departmental materials must be sent to the sampling coordinator and the chair of the Sampling Review Committee for permanent filing in the ACL records.

ADDITIONAL PROCEDURES FOR DNA/RNA SAMPLING REQUESTS

Unless otherwise specified by the Sampling Review Committee, all researchers requesting to sample objects to analyze nucleic acids (DNA, RNA, epigenetic data, etc.) must adhere to the following standard procedures for data availability. If compliance with these procedures is problematic, researchers must provide detailed justification for special data handling with supporting information as appropriate, and should provide an alternative strategy for data management and long-term curation in the Data Management Plan (see below).

1. All raw data from high-throughput sequencing experiments must be deposited to the NCBI Sequence Read Archive (SRA) or EBI European Nucleotide Archive (ENA). Uploaded files must be complete raw reads: fastq files or equivalent un-modified base call files from sequencing platforms. Default adapter trimming during base calling (or platform-specific equivalent) is the only allowable modification to uploaded reads. We encourage release of any other data types such as read alignments and variant call summaries that would be useful to researchers, but complete raw reads must be made available in all cases. Read metadata should include SI accession numbers, and researchers should provide nucleotide archive accession details to collections staff to be linked to the SI anthropology collections database. It is advised to consult with collections staff at the time of data archiving.
2. Sanger-sequenced fragments must be deposited in GenBank.
3. Data deposition should happen at the time of publication, including to preprint servers. However, data must be released within 3 years after the sampling date regardless of publication status. Data can be restricted under Ft. Lauderdale and Toronto Agreement guidelines to reserve

the first right to publish for an additional 1 year. Extensions to these deadlines may be requested from the Sampling Review Committee but are not guaranteed, and researchers should present a clear plan for timely data analysis and release in the Data Management Plan (see below). The requirement to report results and progress to the Department of Anthropology within 1 year after sampling also applies to DNA/RNA requests, in addition to the 3 year data deposition requirement.

4. If SI Anthropology collections are analyzed in publications along with non-SI samples, modern or ancient, ALL of them are subject to the data release requirements in 1 and 2 above (the non-SI samples are not under the 3-year limit). This is necessary for full replicability of studies for which SI collections were destructively sampled.
5. Raw data must be backed up at all times until stable archiving on SRA or ENA to ensure that data generated from destructive sampling are safe from accidental loss. Backup should be either on a stable commercial platform (e.g. Amazon AWS, Dropbox, Google Cloud Storage) or on a physical backup in a separate location from primary data storage. For example, a redundant server in the same room is not sufficient, but a second-site server or external hard drive that is regularly checked for data integrity are sufficient. Institutional IT and high-performance computing departments can usually help provide options for data backup if needed.
6. In addition to the sampling request form and project proposal, requestors must submit a brief (<300 word) data management plan outlining the specific strategy and timeline of data collection, backup, and release. Please include the intended data repository as well as the intended data backup mechanism including type (commercial cloud storage or physical redundant storage).
7. As with all sampling requests, the Sampling Review Committee will consider nucleic acid sampling requests strictly in context of ethical requirements. These may include consultation with and approval from descendant communities and institutional review boards, when applicable. Researchers should provide supporting documents as appropriate.