How to collect samples to get the best C14 dates?

By popular request, we have prepared sampling advice to help you select and prepare samples to ensure the best radiocarbon results.

**Bone & Teeth**
We recommend you collect good cortical bone fragments from larger bones of the body, since these bone fragments preserve well. Larger bones include the femur, tibia, upper arm bone, skull plate and jaw. For human teeth, preferred samples are single complete incisor or canine. If a molar is the only choice, all 4 roots must be attached.

**Charcoal**
To separate charcoal from sediment matrix, you may use tweezers or micro tweezers. For larger pieces of charcoal that are not covered in a lot of clay, you can use water flotation. It is best you wear gloves during water flotation and dry charcoal samples at temperatures less than 70°C for 12-24 hours prior to shipping.

**Pottery**
You can extract charred food residue from the interior surfaces of a sherd. The burned food residue has to be a patina that can be removed in small bits or chunks rather than a sooty powder. If you cannot extract burned food residue, you may collect "bulk sherd organics" - the total organic material from the clay or that the clay was in contact with. Extracting organic tempering agents for dating is a third option when either the organic material is charred or the firing temperature was too low to burn the material away. Please contact us if you’re not sure what might be dated for your pottery sherd.

**Wood**
You can use water flotation to separate wood from sediment matrix. For conserved wood, make sure to select samples from a section that does not show any signs of insect activity or rot and does not seem like it has been treated with preservatives or additives. We recommend you collect conserved wood samples from the outermost section of the piece to make sure the outer growth rings are dated if you want to know the approximate time of death of the tree as close as physically possible.

How should I package my samples for shipping?

We recommend you place samples in ziplock bags or in aluminum foil for small samples. To protect the samples from being crushed during shipment, you may send them in small boxes rather than envelopes.

**Sample sizes & recommendations for additional materials**
We are committed to protect your privacy

We have recently updated our Privacy Policy in support of the EU General Data Protection Regulation (GDPR), in effect from May 25. You are welcome to review the policy to learn more about how we process your data in order to provide you laboratory services and updates.

We send these email updates 2-3 times a year. You have the option to unsubscribe at any time. You can always contact us if you have any questions or requests related to your personal data.

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