

# **Pretreatment of Archaeological Samples**

**March 28, 2013**

Amanda Wallace

Prior to radiocarbon measurement, samples must first undergo a pretreatment process to eliminate any contaminants. These contaminants contain carbon that can skew radiocarbon dates. Traditional pretreatment methods involve an acid-base-acid (ABA) wash. As an alternative, we utilize plasma oxidation to convert organic matter into carbon dioxide which negates the need for acid pretreatment washes. The new objective is to replace the base wash by use of supercritical fluid extraction (SFE). SFE uses supercritical CO<sub>2</sub> as a solvent to effectively extract and diffuses rapidly through materials with minimal destruction to archaeological artifacts.