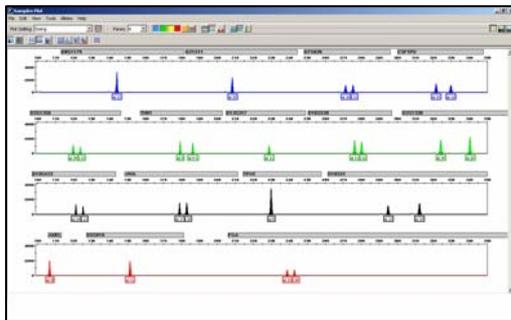


System Solutions for Bone Samples Processing

DNA ID bone samples using the tested procedures

Preparation of bone samples for DNA extraction in validated and controlled environment is the way for getting the best DNA typing results. We are aware of the key-factors influencing the final DNA yield and contamination status. The system solution for bone sample processing was tested on large series of samples from post-conflict areas, bone-libraries and even on ancient material.



The package offered by Forensic DNA Service for Bone sample Processing consists of bone sanding and cutting tool, mobile safety cabinet, press and pressing tool and/or stain-less steel blender for preparing bone powder from sample fragments. We also offer reference bone samples with known DNA profile, Standard Operating Procedure for Bone sample preparation and DNA extraction, UV/HEPA DNA extraction cabinets, UV-crosslinker, DNA-free consumables, special extraction chemicals, and technical support.

Press and pressing tool for small bone fragments

We developed special pressing stain-less steel pistons that will enable you to disintegrate small bone fragments and teeth without the loss of material. We deliver the pistons in 2 diameters or we can manufacture custom made ones to fit your needs.



Blender and cups



Using the 2-speed blender you can get very fine bone powder suitable for subsequent DNA extraction. Blender cups are easy to clean and the construction enables easy replacement of blades.

Mobile safety cabinet

Mobile cabinet protects personnel and laboratory from the bone powder created during sample manipulation, cleaning, and cutting.





Bone cleaning and cutting tools



In order to minimize the contamination risks the external and internal surfaces of the bone specimens must be removed by an appropriate sanding tool (2-3 mm deep) prior to the extraction. Cutting the cleaned fragment to the smaller fragments will speed-up the grinding process.



Reference bone samples

In order to validate your own bone extraction procedure you need to have a reference sample with known DNA profile.

Special extraction chemicals

Finding viable DNA in an ancient source is perhaps the most challenging aspect of DNA analysis of bone samples. **PTB (N-phenacylthiazolium bromide)** is a revolutionary, proprietary organic compound that enhances the yield of DNA from ancient materials. PTB is a reagent that cleaves glucose-derived protein cross links. For ancient or degraded samples, or samples that contain PCR inhibitors, PTB can be added to the extraction mixture to release DNA that might be trapped within sugar-derived condensation products since it cleaves glucose-derived protein cross-links. The compound has proven to be a key factor in the extraction of DNA from pre-historic remains, specifically Neanderthals, Mammoths and Giant Ground Sloths. PTB disrupts AGE crosslinks and its use makes it possible to amplify DNA sequences from ancient samples. PTB is also a valuable tool for forensics and ancient DNA labs that routinely deal with the extraction of DNA from degraded tissue.

Ordering information:

Cat. number	Product description
FDNAS- B-1101	2 ton press
FDNAS- B-1102	Stain-less steel pressing tools (2 piston diameters)
FDNAS- B-1201	2-speed blender
FDNAS- B-1202	Blender cup
FDNAS- B-1203	Spare blades for blender cup
FDNAS- B-1300	Mobile safety cabinet for bone cleaning and cutting
FDNAS- B-1401	Bone cleaning and cutting tool
FDNAS- B-1402	Cutting diamond wheel
FDNAS- B-1403	Set of sanding bands and drums
FDNAS- B-1500	Reference bone sample with known DNA profile (min 2 grams)
FDNAS- B-1600	PTB (N-phenacylthiazolium bromide) 0.5 gram
FDNAS- B-2100	Standard Operating Procedure for Bone cleaning and DNA extraction