

FORENSIC BIOLOGY PROTOCOLS FOR FORENSIC STR ANALYSIS

Reconstitution of DNA Dried with GenTegra		
Status: Published		Document ID: 135885
DATE EFFECTIVE 05/19/2026	APPROVED BY Nuclear DNA Technical Leader	PAGE 1 OF 2

Reconstitution of DNA Dried with GenTegra

This procedure is used for reconstitution of DNA samples dried with GenTegra for room temperature preservation. The appropriate volume of water for reconstitution should be determined by considering the original extraction method, the initial DNA concentration, the intended downstream application, and other relevant factors.

Follow all relevant processes in the [General Guidelines for Forensic Biology and DNA Casework procedure](#).

Follow all relevant processes in the [BEAST DNA Worksheet Setup Manual](#) for creating and adding to worksheets and [BEAST DNA Worksheet Processing Manual](#) for how to record all relevant information while processing the worksheets.

1 Pre-Processing

- 1.1 Samples not already present in the BEAST need to be added into the system. Contact LIMS Super Users to add ad hoc samples in BEAST.

2 Procedure

- 2.1 Retrieve and take custody of each sample.
- 2.2 Obtain one 1.5mL tube for the reconstitution negative and label it with the associated reconstitution negative label.
- 2.3 **Sample Setup WITNESS:** Have another analyst confirm the sample setup.
 - 2.3.1 Read the sample label for each extract.
 - 2.3.2 Record the 'Sample Setup Witness'.
- 2.4 Briefly centrifuge all dried DNA sample tubes before opening the caps.
- 2.5 Add the appropriate amount of Amplification Grade Water to the dried DNA sample(s). Try not to touch the DNA pellet with the tip when dispensing water to each tube. Recap the tube.
- 2.6 Record the volume added for each sample and the lot number of Amplification Grade Water used in the 'H₂O or TE Volume' column.
- 2.7 Briefly centrifuge each tube and incubate the samples for 15 minutes at room temperature.
- 2.8 Gently vortex and/or tap the tubes for 1 minute.

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Note: The GenTegra manual recommends not vortex but gently agitate for 1 minute, since vortexing can cause mechanical shearing of the DNA. To ensure recovery as much as possible of DNA, here we recommend vortex Intermittently/gently and/or tapping the tube for 1 minute.

- 2.9 Record the 'Reconstituted By' review task and the 'Response' dropdown.
- 2.10 Transfer custody of all extracts to a cryobox and store in a refrigerator or freezer.
- 2.11 Assign samples to next process step, as needed.