

DRYING AND RE-HYDRATING DNA EXTRACTS

Background

This protocol outlines the procedure for Drying and re-Hydrating DNA Extracts.

Sample Handling

All biological samples and DNA must be treated as potentially infectious. Appropriate sample handling and disposal techniques should be followed. See:

- **Safety Manual**, *Universal Precautions*
- **Quality Assurance Manual**, *General Sample Control and Forensic Sample Preservation Policy*
- **Analytical Procedures Manual**, *Forensic Evidence Handling*

Reagents and Materials – Storage and Handlings

All reagents and materials are to be kept under sterile conditions. Store all reagents according to the manufacturers' recommendations.

Quality Control

Use of the **Evidence Examination Worksheet** or other appropriate worksheet is required for documentation. All information must be completed.

Procedure

Concentration Steps:

1. Mark the liquid volume level on the sample tube(s) with a permanent marker.
2. Place the open samples in the miVac DNA Concentrator ensuring a balanced rotor load.
3. Set the Method to H2O by rotating the Select control until brackets appear around the method indicator, press the Select control and the brackets begin to flash, turn until H2O method is shown, then press to select.
4. By using the Select button as described in step 2 set the temperature to 43°C, the timing mode to TOTAL and time of concentration desired (if using AUTO mode).
5. The miVac DNA Concentrator has two modes: MANUAL or AUTO. Press the MANUAL button once to start the system in manual mode, the concentrator starts and continues to operate until the STOP button is pressed. Press the AUTO button once to start the system in auto mode, the concentrator starts and continues to operate until the TOTAL time set has elapsed. The average drying time is 2.1uL/min when using the above parameters.

NOTE: When the time displayed is greater than one hour, it is shown in hours and minutes (HH:MM) when the time displayed is less than one hour, it is shown in minutes and seconds (MM:SS).

6. Run the miVac DNA Concentrator until the samples have reached a dried state.

Rehydration Steps:

1. DNA extracts that have been dried down may be rehydrated for additional DNA testing. Rehydrate samples by adding the desired amount of MBG H₂O to the sample tube.
2. Retain a portion of the MBG H₂O for a reagent blank.
3. Briefly vortex and spin down the sample.
4. Incubate at 56°C for a minimum of two hours to fully re-solubilize the DNA.

Reference

Michigan State Police; 2.15 Drying and re-Hydrating DNA Extracts or Liquid Samples protocol

The miVac Modular Concentrator Series User Manual, Issue 2-3-March 2011