

A NEW METHOD TO RECOVER TRACE DNA

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The Sydney Forensic Biology Laboratory examines a significant proportion of crime scene items for contact or trace DNA. Routine methods used to recover trace DNA are by double swabbing, direct sampling or tape lifting, depending on the type of substrate tested. Tape lifting normally recovers the highest quantity of DNA from clothing but there are disadvantages associated with its use, including difficulty in manipulating the 'sticky' tape.

A new method to recover trace DNA by using a vacuum source was investigated. A vacuum device, which was made by covering a perforated filter paper over a vacuum source, was tested and found to successfully recover trace DNA from worn clothing.

A concordance study was carried out comparing the new method to the current tape lift method. Testing of similar sized target areas commonly recovered greater quantities of DNA by the vacuum method compared to the tape lift method. Increased sensitivity of sampling was also more apparent as the minor DNA components were often more pronounced.

The vacuum method was found to have the advantage of taking less time to conduct and also less cumbersome than the tape lifting method. Investigations currently being undertaken to explore potential uses and limitations of this new technique will be discussed.