

## **DEVELOPMENT OF A ONE-TUBE EXTRACTION AND AMPLIFICATION METHOD FOR CELLS RECOVERED BY LASER MICRODISSECTION. APPLICATION TO FORENSIC CASEWORK**

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Laser microdissection is a tool used in forensic casework to visualise and recover specific cell types from mixtures of biological samples. This technique is especially useful for sexual assault cases where few numbers of sperm may be present in samples that have an excess of epithelial cells. In our laboratory we have developed an effective one-tube method for the extraction of sperm and epithelial cells recovered using laser microdissection. The development of the one-tube extraction and amplification method allows us to maximise the DNA recovery, minimising loss through liquid transfers. This method had no deleterious effects on the downstream compatibility with STR amplification and performed well when compared with a commercial DNA extraction kit for the extraction of DNA from sperm. In this presentation I will discuss the development of the method and the outcomes of challenging casework samples that have undergone laser microdissection.