ABSTRACT

CONCLUSIONS

INTRODUCTION

In the field of Forensic Science, it is essential that from biological stains, both the type of tissue and the individual who deposited the stain be identified. Recently, microRNAs (miRNA) have been suggested as potential biomarkers for body fluid identification (Zubakov 2010). However, depending on the amount of biological evidence left behind, if there are only trace amounts, miRNA analysis will consume the sample and as a result eliminate the possibility of obtaining a DNA profile (Hanson 2012). Therefore there is a great need for a method, which performs both RNA and DNA extraction simultaneously from one sample. There are only a few methods currently offered for this purpose. Therefore it is crucial that these methods are tested extensively and compared to one another. Recent research has shown that microRNA (miRNA) shows great potential for the identification of body fluids in forensically relevant samples, due to their small size, stability and robustness (Zubakov 2010). MiRNA does not degrade easily and can be analyzed months, and in some cases, years later (Haas 2013). However, it is crucial that we can extract both RNA and DNA from the one sample simultaneously, thereby allowing us to identify both the 'who' and 'what' of the sample.

REFERENCES