Accepted Manuscript

Title: In-field collection and preservation of decomposing human tissues to facilitate rapid purification and STR typing

Authors: Amy S. Holmes, Madeline G. Roman, Sheree

Hughes-Stamm

PII: S1872-4973(18)30135-2

DOI: https://doi.org/10.1016/j.fsigen.2018.06.015

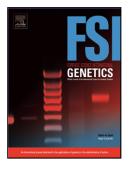
Reference: FSIGEN 1913

To appear in: Forensic Science International: Genetics

Received date: 2-3-2018 Revised date: 13-6-2018 Accepted date: 25-6-2018

Please cite this article as: Holmes AS, Roman MG, Hughes-Stamm S, In-field collection and preservation of decomposing human tissues to facilitate rapid purification and STR typing, *Forensic Science International: Genetics* (2018), https://doi.org/10.1016/j.fsigen.2018.06.015

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

In-field collection and preservation of decomposing human tissues to facilitate rapid purification and STR typing

Amy S. Holmes^a, PhD; Madeline G. Roman^a, BS; Sheree Hughes-Stamm^a, PhD

^aDepartment of Forensic Science, College of Criminal Justice, Sam Houston State University, Huntsville, TX 77340

Amy S. Holmes <u>aes049@shsu.edu</u>
Madeline G. Roman mgr019@shsu.edu
Sheree Hughes-Stamm sxh039@shsu.edu

Corresponding Author: Amy S. Holmes 1003 Bowers Blvd. Department of Forensic Science Sam Houston State University Huntsville, TX, 77340

Hghlights

- Tissues were stored in modified TENT preservative or FTA Elute Cards up to 6 months
- Tissues stored in TENT had higher DNA quantities and more complete STR profiles
- PDQeX DNA extraction provided the most complete STR profiles in under 20 minutes
- DNA suspended in TENT facilitated fast purification or direct PCR for fresh tissues

1. Introduction

Short tandem repeat (STR) typing is currently the gold standard for human identification. However, successful STR typing is often affected by the presence of inhibitors, low amounts of DNA template, and damaged and/or degraded DNA [1-4]. Refrigeration or freezing of samples is typically used to prevent further DNA damage and degradation [4-8]. In the event of a mass fatality event or in rural casework, refrigeration is often not possible due to a lack of facilities and/or limited electricity [5, 6, 8]. If human remains are left exposed to evironmental conditions such as

Download English Version:

https://daneshyari.com/en/article/6553194

Download Persian Version:

https://daneshyari.com/article/6553194

<u>Daneshyari.com</u>