



Population genetic analysis in a Libyan population using the PowerPlex 16 system

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Abstract. We present Libyan allele frequency data of 15 loci amplified by the GenePrint® PowerPlex 16 system (Promega). © 2005 Elsevier B.V. All rights reserved.

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1. Introduction

The use of polymorphic short tandem repeats (STRs) has become important in genetics applications, such as gene mapping, identification and paternity. In forensics, STRs are mainly used for paternity testing and personal identification.

In this study, we present the results of a survey aimed at investigating the allele frequency distribution of 15 loci amplified by the GenePrint® PowerPlex 16 system (Promega) in Libya.

2. Materials and methods

Blood samples were taken from 103 unrelated individuals from Libya. DNA was isolated using an alkaline lysis extraction protocol [1].

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Table 2
Allelic frequencies of D21S11 in 103 unrelated Libyans

D21S11						
Allel	27	28	29	30	30.2	31
Frequency	0.034	0.063	0.233	0.286	0.034	0.068
Allel	31.2	32.2	33.2	34.2	35	36
Frequency	0.126	0.083	0.053	0.005	0.010	0.005

2 μ l of the extracts were amplified following the protocols described in the PowerPlex 16 manual with two modifications: No quantification of the DNA in the extracts was performed and the PCR volume was 12.5 μ l.

Amplification products were analyzed by capillary electrophoresis using the ABI 310[®] Genetic Analyzer according to the manufacturer's recommendations (Applied Biosystems).

3. Results and discussion

Results for all loci are given in [Tables 1 and 2](#).

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Reference

- [1] M. Klintschar, F. Neuhuber, Evaluation of an alkaline lysis method for the extraction of DNA from whole blood and forensic stains for STR analysis, *J. Forensic Sci.* 45 (2000) 669–673.