

FOR THE RECORD

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A Spanish Population Study of the STR Loci D2S1338, D19S433, Penta D, and Penta E

POPULATION: Central Spanish population ($n = 187-208$)

KEYWORDS: forensic science, DNA typing, short tandem repeat, population genetics, Central Spain

The allele frequencies for the loci D2S1338, D19S433, Penta D, and Penta E were determined in a Spanish population. Whole blood samples were obtained from 187–208 unrelated donors from Central Spain. Genomic DNA was extracted by a standard phenol/chloroform extraction procedure. PCR amplification was performed using the AmpF ℓ STR SGM Plus D2S1338 and D19S433 loci—amplification kit (Applied Biosystems, Foster City, CA) and PowerPlex 16 Penta D and Penta E—amplification kit (Promega Corporation, Madison, WI) following manufacturer's instructions. The amplified products were separated and detected using the ABI 377 DNA sequencer (Applied Biosystems, Foster City, CA). Alleles were classified according to the recommendations of the ISFG (1). Statistical analysis was performed as previously reported (2). The complete dataset is available to any interested researcher upon request from the corresponding author.

References

1. DNA recommendation. Report concerning further recommendations of the DNA Commission of the ISFH regarding PCR-based polymorphism in STR (short tandem repeat) system. *Int J Legal Med* 1994;107:159–60.
2. Yunis JJ, García O, Baena A, Arboleda G, Uriarte I, Yunis E. Population frequency for the short tandem repeat loci D18S849, D3S1744, and D12S1090 in Caucasian-Mestizo and African descent populations of Colombia. *J Forensic Sci* 2000;45(2):429–31.

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TABLE 1—STR loci from a Spanish population sample.

Allele	D2S1338	D19S433	Penta D	Penta E
2.2			0.0080	
5				0.0321
7			0.0080	0.1444
8			0.0160	0.0134
9			0.2139	0.0214
10		0.0024	0.0989	0.1310
11		0.0048	0.1524	0.1283
12		0.0937	0.1872	0.1872
12.2		0.0096		
13		0.2332	0.1898	0.1176
13.2		0.0048		
14		0.3317	0.0856	0.0348
14.2		0.0264		
15		0.1587	0.0321	0.0481
15.2		0.0481		
16	0.0432	0.0553	0.0080	0.0455
16.2		0.0168		
17	0.2812	0.0096		0.0481
17.2		0.0024		
18	0.0817			0.0134
18.2		0.0024		
19	0.1106			0.0187
20	0.1442			0.0080
21	0.0361			0.0053
22	0.0553			0.0027
23	0.0721			
24	0.0841			
25	0.0745			
26	0.0144			
27	0.0024			
H	0.8750	0.8125	0.7914	0.8503
PD	0.9591	0.9332	0.9554	0.9734
CE	0.7447	0.6224	0.5833	0.6954
P*	0.5120	0.8955	0.7575	0.3525
P**	0.4880	0.8525	0.6480	0.4505

H: observed heterozygosity, PD: Power of discrimination, CE: a priori chance of exclusion, P*: Hardy-Weinberg equilibrium, Chi-square test, P**: Hardy-Weinberg equilibrium, exact test based on 2000 shufflings.