

## FOR THE RECORD

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# Allelic Frequency of Six STR Loci in Five Colombian Cities\*

**POPULATION:** One hundred seventy nine healthy unrelated individuals from Colombia, South America

**KEYWORDS:** forensic sciences, DNA typing, populations genetics, short tandem repeat (STR), Hardy-Weinberg expectations, PCR, F<sub>ST</sub>, FES/FPS, F13A01, vWA, CSF1PO, TPOX, TH01

Blood samples were obtained at blood banks in large cities such as Bogotá, Cali, Cúcuta, Barranquilla, and Medellín by venopuncture with EDTA anticoagulant. They were informed of the research and so they donated their blood voluntarily before signing a written consent document. Genomic DNA was extracted by using phenol-chloroform methods with some modifications for anticoagulated blood samples (1). The ion-exchange resin method (CHELEX 100) was also used according to the established protocol (2). DNA samples were amplified through PCR reactions using the multiplex kit (CTT and FFv from Promega Corp., GenePrint™, STR Systems, Silver stain detection Madison, WI). The PCR products from the six STR loci were analyzed using vertical electrophoresis protocol; minor modifications were introduced to fit available equipment. An electrophoresis camera (C.B.S. Scientific Co., Del Mar, adjustable CA, ASG 250-400 U.S. version) was used for 6% polyacrylamide denaturing gels in all six STR markers. Then, silver staining was applied according to the method described by Bassam BJ (3). Amplification was made in a LABLINE, 212S-model

thermal cycler. The Hardy-Weinberg equilibrium was calculated for all markers by using the Markov chain test (Arlequín 2.0). The other forensic parameters evaluated were the following: observed and expected heterozygosity.

The complete dataset is available to any interested party at: <http://www.javeriana.edu.co/genetica/html/0603.html>

## References

1. Sambrooc J, Fritsch EF, Maniatis T. Molecular cloning. A laboratory manual. 2nd ed. Cold Spring Harbor, N.Y. Cold Spring Harbor Laboratory Press. 1989.
2. Walsh PS, Metzger DA, Higuchi R. Chelex 100 as a medium for the simple extraction of DNA for PCR-based typing from forensic materials. *Biotechniques* 1991;10(4):506-13.
3. Bassam BJ, Caetano-Anolles G, Gresshoff PM. Fast and sensitivity silver staining of DNA in polyacrilamide gel. *Analytical Biochemistry* 1991; 196(1):80-3.

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TABLE 1—Allelic frequencies of six STRs in Colombian population.

Alleles	CSF1PO <i>n</i> = 135	TPOX <i>n</i> = 134	TH01 <i>n</i> = 135	F13A01 <i>n</i> = 161	FES/FPS <i>n</i> = 177	vWA <i>n</i> = 179
<4				0.0909		
4				0.2192		
5			0.0000	0.2112		
6		0.0037	0.3444	0.2219		
7	0.0037	0.0000	0.2740	0.1871	0.0028	
8	0.0222	0.4701	0.1037	0.0427	0.0197	
9	0.0111	0.0820	0.1259	0.0053	0.0028	
9.3			0.1296			
10	0.2518	0.0597	0.0222	0.0000	0.2203	
11	0.2518	0.2835	0.0000	0.0026	0.4378	
12	0.3962	0.1007		0.0000	0.2259	
13	0.0518	0.0000		0.0080	0.0847	0.0111
14	0.0111			0.0000	0.0056	0.0810
15	0.0000			0.0026		0.0614
16				0.0080		0.3826
17						0.2458
18						0.1312
19						0.0837
20						0.0027
H obs	0.7629	0.7611	0.7185	0.6956	0.7175	0.8399
H exp	0.7830	0.7636	0.8299	0.8408	0.7851	0.8050
<i>p</i>	0.9200	0.1943	0.3986	0.0004*	0.9062	0.0229*
$F_{ST}$	0.0173	0.0056	0.0029	0.0292	0.0148	0.0112
Average $F_{ST}$	0.0135					

H obs: Heterozygosity observed, H exp: Heterozygosity expected,  $F_{ST}$ : Population subdivision coefficient, *p*: H-W Exact test (Markov Chains), \**p*<0.05.