

**POWERPLEX 1.1™ ALLELIC FREQUENCIES IN THE FEDERAL DISTRICT OF BRAZIL**

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The Forensic DNA Research Division, at Brazil's capital, works with paternity and forensic cases, using STR methodology. The amplification is performed by thermocyclers Perkin-Elmer 9600, followed by PAGE and subsequent analysis on the fluorescence scanner FMBIO® II (Hitachi Corporation). Forensic samples are studied with the PowerPlex™ 1.1 (Promega) system and statistical evaluation made from the Promega combined tables. The allele frequency analysis of these eight loci showed consistent results with that used until now, producing similar statistical results in simulations. Some less frequent alleles were found (as the number 6 in D13S317 and 13 in TPOX), but at frequencies lower than 1%. The results come from 1,289 samples analyzed, including fathers and mothers from paternity cases, suspects and victims from forensic cases, and criminal samples as sperm from rape occurrences, most of them coming from the West-Central region of Brazil. The results obtained can be used in forensic and paternity cases when analyzing population from that Brazilian area.

	<b>Number of alleles</b>	<b>Homozygotes</b>	<b>Heterozygotes</b>	<b>Power of Discrimination</b>	<b>Power of Exclusion</b>
<b>D16S539</b>	1958	21.02%	78.98%	0.9140	0.5792
<b>D7S820</b>	2340	20.34%	79.66%	0.9268	0.5932
<b>D13S317</b>	1920	21.25%	78.75%	0.9133	0.5766
<b>D5S818</b>	1965	26.40%	73.60%	0.8845	0.4884
<b>CSF1PO</b>	2342	27.50%	72.50%	0.8815	0.4683
<b>TPOX</b>	2362	30.08%	69.92%	0.8668	0.4271
<b>TH01</b>	2376	19.61%	80.39%	0.9260	0.6070
<b>vWA</b>	2286	18.29%	81.71%	0.9315	0.6318