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**Technical specification for identification of biological full
sibling relationship**

生物学全同胞关系鉴定技术规范

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the Ministry of Justice of the People's Republic of China.

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Technical specification for identification of biological full sibling relationships

1 Scope

This document specifies the general requirements, testing procedures, and parameters for the use of autosomal STR loci for biological full-sib relationship testing.

Requirements for calculations, expert opinions and expert documents.

This document is applicable to the identification of biological full sibling relationships and unrelated individuals between two individuals.

This document is not applicable to the determination of other relatedness (such as half-siblings or cousins, etc.).

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GA/T 1162 Specification for the collection, storage and submission of forensic biological specimens
GA/T 1163 Analysis and application of human DNA fluorescent marker STR typing results
SF/T 0069 Forensic evidence identification laboratory management specification
SF/T 0134 Technical specification for nucleic acid extraction from forensic biological samples

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 FS

Multiple offspring individuals with the same biological father and mother.

3.2 The process of making a judgment

Through the detection of human genetic markers and analysis of genetic laws, it is possible to determine whether the two individuals in dispute are full siblings (3.1).

3.3

For each STR locus, the number of identical alleles between two disputed individuals.

Note. Two individuals may have the same allele at the same locus. This may be due to inheritance or the consistency of random matching.

When multiple independent autosomal genetic markers are used When the typing system tests two controversial individuals, the sum of the IBS at each genetic marker is called the cumulative consistency score (CIBS).

3.4 Full sibling relationship index; FSI

For each STR locus, the probability of the genotype occurring when the two disputed individuals are full siblings (3.1) The ratio of the probability of the genotypes appearing when the two controversial individuals are unrelated is calculated as shown in formula (1).