



SC Issues DNA Evidence Guidelines in Criminal Cases

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Why in News?

In the *Kattavellai@Devakar v. State of Tamil Nadu case 2025*, the [Supreme Court \(SC\)](#) issued guidelines to ensure the integrity of [DNA](#) evidence in criminal investigations.

What are the Key SC Guidelines on DNA Evidence Handling?

- **Proper Documentation at Collection Stage:** The document must record important information like **FIR number, investigating officer details**, signatures of the **medical professional, and independent witnesses**.
 - Samples must not be opened, altered, or resealed without **trial court authorization**.
- **Timely Transportation:** The **investigating officer** must transport **DNA samples** to the **Forensic Science Laboratory (FSL)** within **48 hours**.
- **Chain of Custody Maintenance:** A **Chain of Custody Register** must be maintained from **sample collection to case closure** and included in the **trial court record**.

What are the Key Issues Involved in DNA Evidence Management?

- **Collection and Preservation Issues:** **DNA evidence** is prone to **contamination, degradation** from heat or moisture, and may have **insufficient quantity** for analysis or retesting.
- **Analysis Issues:** **DNA evidence** faces **human error, bias**, and **lack of standardized lab protocols**, affecting reliability.
- **Privacy Issues:** **DNA databases** raise **privacy concerns, function creep, surveillance risks**, and potential **genetic discrimination**.
- **Interpretative Issues:** **Overreliance on DNA** and challenges with **complex mixtures or trace DNA** can lead to **misinterpretation and wrongful convictions**.

Judicial Stand on DNA Evidence Admissibility

- **Kunhiraman v. Manoj Case (1991):** DNA technology was first used in India to resolve a paternity dispute.
- **Sharda v. Dharmpal Case (2003):** The Supreme Court endorsed the use of DNA technology in civil and matrimonial disputes, ruling it does not violate **Article 21 (right to personal liberty)** or **Article 20(3) (right against self-incrimination)**.
- **Bharatiya Nagarik Surakhsha Sanhita, 2023 (Section 51):** Authorizes the medical examination of apprehended individuals, including DNA profiling and other necessary tests by a registered medical practitioner.
- **Rahul v. State of Delhi, MHA (2022):** DNA evidence was rejected as the sample remained in police custody for two months, raising **tampering concerns**.
- **Devakar case (2025):** **DNA evidence** is classified as **opinion evidence** under **Section 39 of the Bharatiya Sakshya Adhiniyam, 2023**, and its probative value differs by case, requiring **scientific and legal validation**.

Conclusion

The Supreme Court's guidelines in **Kattavellai @ Devakar v. State of Tamil Nadu (2025)** ensure **uniformity, scientific validity, and integrity of DNA evidence in criminal cases**. Proper documentation, timely transportation, preservation, and chain of custody are critical to prevent contamination and strengthen the probative value of DNA as **opinion evidence** under the law.

Drishti Mains Question:

Q. Discuss the significance of the Supreme Court's guidelines in maintaining the integrity of DNA evidence in criminal investigations.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Consider the following statements: DNA Barcoding can be a tool to:(2022)

1. assess the age of a plant or animal.
2. distinguish among species that look alike.
3. identify undesirable animal or plant materials in processed foods.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 3 only
- (c) 1 and 2
- (d) 2 and 3

Ans: (b)

Q. With reference to the recent developments in science, which one of the following statements is not correct? (2019)

- (a) Functional chromosomes can be created by joining segments of DNA taken from cells of different species.
- (b) Pieces of artificial functional DNA can be created in laboratories.
- (c) A piece of DNA taken out from an animal cell can be made to replicate outside a living cell in a laboratory.
- (d) Cells taken out from plants and animals can be made to undergo cell division in laboratory petri dishes.

Ans: (a)

