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Calibrating Scientific Rigor with Constitutional Due Process,
Authored By: Dipti Sharma, Research Scholar, Punjabi University &
Co-Authored By: Krishan Sharma, Advocate, Punjab and Haryana
High Court.***



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I. INTRODUCTION:

The Narcotic Drugs and Psychotropic Substances Act, 1985 ("NDPS Act"), is widely known to be one of India's strictest criminal laws. The Act sets minimum sentences that must be followed, limits the judge's ability to make decisions about sentencing, and creates legal presumptions against the accused under ***Sections 35 and 54***. The NDPS Act is different from most other criminal laws because it has harsh punishments and strict bail rules under Section 37. This combination makes the Act a powerful tool for the State and a common target for constitutional and procedural review. The severity of the NDPS Act raises a jurisprudential paradox. On the one hand, Parliament intended to create a deterrent regime to combat drug trafficking in line with India's obligations under the 1961 Single Convention on Narcotic Drugs and subsequent UN treaties.¹ On the other hand, the Supreme Court has repeatedly emphasized that where a statute imposes unusually severe consequences, procedural safeguards must be "***strictly construed and scrupulously observed.***"² This paradox becomes particularly acute in the realm of forensic evidence. NDPS prosecutions increase or decrease based not only on the actual recovery of contraband but also on the ability to scientifically and procedurally link the recovery to the accused through an unbroken chain of custody, dependable laboratory analysis, and adherence to required safeguards. In many cases where contraband was found, the courts have let the accused go because the State couldn't show that they followed ***S.50 (personal search), S. 42 (recording of information), or S. 52-A (integrity of sampling).***³

In this sense, forensic processes and procedural safeguards are not peripheral—they are central to the administration of justice under the Act. **This article contends that NDPS jurisprudence has evolved along a dual axis:** (a) doctrinal vigilance by the judiciary in the interpretation of provisions concerning search, seizure, and evidentiary presumptions; and (b) forensic reliability in the procedures of seizure, sealing, sampling, laboratory testing, and courtroom

¹ Single Convention on Narcotic Drugs, Mar. 30, 1961, 520 U.N.T.S. 151.

² State of Punjab v. Baldev Singh, (1999) 6 SCC 172.

³ Vijaysinh Chandubha Jadeja v. State of Gujarat, (2011) 1 SCC 609; Karnail Singh v. State of Haryana, (2009) 8 SCC 539; Union of India v. Mohanlal, (2016) 3 SCC 379.

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evidence presentation. It aims to integrate these two dimensions into a comprehensive framework for comprehending the calibration of forensic evidence and procedural safeguards to align with constitutional standards.

II. LITERATURE REVIEW:

The literature on NDPS enforcement is a blend of doctrinal analysis, empirical studies, and policy critiques. Indian scholarship has repeatedly emphasized the frailty of NDPS prosecutions in practice. The *Vidhi Centre for Legal Policy's 2020* report documented how procedural lapses, particularly in search and seizure, result in high acquittal rates.⁴ Similarly, empirical research from the *National Law University Delhi's Project 39A* highlighted that undertrial prisoners booked under the NDPS Act often languish in custody for extended periods due to restrictive bail provisions, even in cases involving minor quantities.⁵ Data from the *National Crime Records Bureau (NCRB)* further supports these findings. *The NCRB's Crime in India 2022* report noted that while arrests under the *NDPS Act* have steadily increased, conviction rates remain inconsistent across states, with acquittals often linked to failures in maintaining chain-of-custody or proving compliance with S. 50.⁶ Internationally, the United Nations Office on Drugs and Crime (UNODC) has emphasized the need for standardized forensic protocols. Its *Guidelines on Drug Law Enforcement* stress that scientific reliability requires accredited *laboratories (ISO/IEC 17025)*, validated methods such as *GC-MS or HPLC, and robust chain-of-custody documentation.*⁷ Comparative studies also provide perspective: in the United Kingdom, courts applying the *Misuse of Drugs Act, 1971* demand rigorous proof of forensic integrity, while in the United States, chain-of-custody requirements under federal law have been strictly enforced to prevent wrongful convictions.⁸

⁴ Vidhi Centre for Legal Policy, Reforming the NDPS Act (2020).

⁵ Project 39A, NLU Delhi, Status of Undertrial Prisoners in India (2021).

⁶ National Crime Records Bureau, Crime in India 2022, at 302–05.

⁷ UNODC, Guidelines on Drug Law Enforcement (2019).

⁸ See Misuse of Drugs Act, 1971 (U.K.); United States v. Lott, 854 F.2d 244 (7th Cir. 1988).

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This body of literature indicates a global consensus: procedural safeguards and forensic rigor are not merely technicalities but essential mechanisms for protecting rights. The Indian judiciary's insistence on strict adherence to NDPS safeguards is in accordance with best practices in comparative and international law.

III. STATUTORY FRAMEWORK GOVERNING FORENSICS

UNDER THE NDPS ACT:

The NDPS Act of 1985 sets up a complete system for controlling narcotic drugs and psychotropic substances. Several parts of this framework have a direct effect on the integrity of forensic evidence and the protection of procedures.

A. Search and Seizure Provisions (S. 42-43):

Section 42 empowers authorized officers to enter, search, seize, and arrest on the basis of prior information reduced to writing, provided the search takes place in a building, conveyance, or enclosed place.⁹ The section mandates that the officer must record the information in writing and forward it to his superior. Section 43, in contrast, governs searches in public places, where less stringent requirements apply.¹⁰ The distinction between S. 42 and 43 has been the subject of sustained litigation, particularly where seizures occur near public-private boundaries such as hotel rooms, railway compartments, or parked vehicles.

B. Personal Search Safeguards (S. 50):

Section 50 is perhaps the most litigated safeguard under the NDPS Act. It stipulates that when a person is about to be searched, the suspect has the right to demand that the search be conducted in the presence of a Gazetted Officer or Magistrate. The provision is designed to introduce a neutral supervisory element into what would otherwise be a police-controlled procedure. Compliance with S. 50 has been repeatedly held to be mandatory when the “person”

⁹ NDPS Act, No. 61 of 1985, S. 42.

¹⁰ Id. S. 43.

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of the accused is searched, though the Supreme Court has clarified that it does not extend to searches of vehicles, containers, or premises.¹¹

C. Custody, Inventory, and Sampling (S. 52-57, 52-A):

Sections 52 to 57 set out post-seizure procedures: the arrested person and seized articles must be forwarded to the officer-in-charge of the nearest police station or the officer empowered under the Act; the officer must make a full report of all particulars to his superior within forty-eight hours; and the seized materials must be stored in safe custody. Section 52-A, introduced in 1989, plays a crucial role in forensic reliability. It allows the officer to prepare an inventory of seized narcotics, take photographs, and draw representative samples in the presence of a Magistrate. The Magistrate certifies the correctness of the inventory, and the certified inventory, photographs, or samples become primary evidence in court. The Supreme Court has recognized S. 52-A as a statutory safeguard against substitution, contamination, or loss of bulk contraband.¹²

D. Presumptions and Reverse Burden (S. 35, 54):

Sections 35 and 54 shift part of the evidentiary burden onto the accused. Section 35 presumes culpable mental state once possession is established, while S. 54 presumes possession if the accused fails to account satisfactorily for contraband found. These provisions underscore the need for foundational facts—namely, a legally valid seizure and scientifically reliable forensic link—before presumptions can arise.¹³

E. Confessional Statements (S. 67):

Section 67 empowers officers to call for information and examine persons during inquiry. For many years, courts admitted confessions recorded under this section. However, in *Tofan Singh vs. State of Tamil Nadu*, a Constitution Bench of the Supreme Court held that NDPS officers are “police officers” within the meaning of the Evidence Act and that confessional statements

¹¹ Vijaysinh Chandubha Jadeja v. State of Gujarat, (2011) 1 SCC 609; State of Punjab v. Baljinder Singh, (2019) 10 SCC 473.

¹² Union of India v. Mohanlal, (2016) 3 SCC 379.

¹³ Noor Aga v. State of Punjab, (2008) 16 SCC 417.

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made to them are inadmissible against the accused.¹⁴ The ruling has fundamentally altered NDPS prosecutions, elevating the importance of forensic and procedural evidence.

IV. JUDICIAL DOCTRINAL DEVELOPMENTS:

**The Supreme Court and High Courts have, over time, developed a rich jurisprudence
balancing NDPS enforcement with constitutional safeguards.**

A. Section 50: Mandatory but Contextual:

In State of Punjab vs. Baldev Singh, a Constitution Bench held that non-compliance with S. 50 vitiates a conviction if the recovery is based on a personal search.¹⁵ Later, in Vijaysinh Chandubha Jadeja vs. State of Gujarat, the Court clarified that the suspect must be informed of his **right** under S. 50; merely asking whether he wants to be searched before a Gazetted Officer is insufficient.¹⁶ However, in State of Punjab vs. Baljinder Singh, the Court ruled that S. 50 applies only to personal searches, not to vehicles or containers.¹⁷ Similarly, in State of Rajasthan vs. Parmanand, it was held that recovery from bags carried on the shoulder or in hand is not automatically a “personal search.”¹⁸ Thus, the jurisprudence carefully distinguishes between personal and non-personal searches, even while insisting on strict compliance where S. 50 is triggered.

B. Section 42: Recording and Reporting Obligations:

In Karnail Singh vs. State of Haryana, a Constitution Bench reconciled conflicting precedents by holding that S.42 compliance is mandatory but not inflexible. If urgent circumstances require immediate action, delayed compliance may be excused, provided reasons are recorded and forwarded to superiors without undue delay.¹⁹ The ruling reflects a judicial attempt to balance investigative exigencies with procedural safeguards.

¹⁴ Tofan Singh v. State of Tamil Nadu, (2021) 4 SCC 1.

¹⁵ State of Punjab v. Baldev Singh, (1999) 6 SCC 172.

¹⁶ Vijaysinh Chandubha Jadeja v. State of Gujarat, (2011) 1 SCC 609.

¹⁷ State of Punjab v. Baljinder Singh, (2019) 10 SCC 473.

¹⁸ State of Rajasthan v. Parmanand, (2014) 5 SCC 345.

¹⁹ Karnail Singh v. State of Haryana, (2009) 8 SCC 539.

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C. Presumptions and Foundational Facts:

The decision in *Noor Aga vs. State of Punjab*, highlighted that presumptions under S. 35 and 54 cannot arise unless the prosecution first establishes foundational facts such as legal seizure and unimpeachable chain of custody.²⁰ This approach has been followed in later cases, reinforcing the principle that reverse burdens do not dilute the prosecution's initial evidentiary burden.

D. Confessions under S. 67: The Tofan Singh Turn:

For years, courts admitted confessions recorded by NDPS officers under S. 67. This practice ended with *Tofan Singh vs. State of Tamil Nadu*, where the Supreme Court held that such confessions are inadmissible as officers under the NDPS Act are "police officers" within the meaning of S. 25 of the Evidence Act.²¹ Post-*Tofan*, NDPS prosecutions must rely primarily on forensic, documentary, and witness evidence.

E. Neutral Substances and Quantity Determination:

In *Hira Singh vs. Union of India*, the Supreme Court clarified that for mixtures of narcotics and neutral substances, the entire weight of the mixture must be considered in determining whether the quantity is "small," "intermediate," or "commercial."²² The ruling overruled *E. Michael Raj*, which had earlier considered only the pure drug content. However, High Courts have since excluded "carriers" such as cloth or containers from being treated as neutral substances, limiting the scope of *Hira Singh*.²³

F. Informant-cum-Investigator Issue:

In *Mohan Lal vs. State of Punjab*, the Court had suggested that if the informant and investigating officer are the same, the trial may be vitiated.²⁴ However, this position was later diluted in *Varinder Kumar vs. State of Himachal Pradesh*, where the Court clarified that such

²⁰ Noor Aga v. State of Punjab, (2008) 16 SCC 417.

²¹ Tofan Singh v. State of Tamil Nadu, (2021) 4 SCC 1.

²² Hira Singh v. Union of India, (2020) 20 SCC 272.

²³ See, e.g., Ajay v. State of Delhi, 2021 SCC OnLine Del 1957.

²⁴ Mohan Lal v. State of Punjab, (2018) 17 SCC 627.

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overlap does not automatically nullify the prosecution unless actual prejudice is demonstrated.²⁵ The debate remains live, with courts taking a fact-sensitive approach.

V. THE FORENSIC PIPELINE: FROM SEIZURE TO TESTIMONY:

NDPS prosecutions are uniquely reliant on preserving an unbroken forensic chain of custody. Seizure, sealing, sampling, custody, forensic laboratory analysis, and courtroom proof are all parts of that chain. One weak link can ruin the whole case. The Supreme Court and High Courts have consistently emphasized that forensic integrity is not merely a procedural formality but a fundamental aspect of justice.

A. Seizure and Seizure Memo:

The forensic process starts at the place where the evidence was found. Officers have to not only find illegal items but also write down exactly how they did it. The seizure memo (panchnama) should include the date, time, place, weight, description, and the way the items were sealed. It would be best if pictures and videos were included with the memo. Independent panch witnesses are often called, but courts have made it clear that if there are no such witnesses, it is not a big deal as long as the official witnesses are credible and the seizure procedures are well-documented.²⁶

In *State of Punjab vs. Balbir Singh*, the Court emphasized that irregularities at the seizure stage can fatally taint the prosecution's case.²⁷ The preparation of specimen seals, noting of seal numbers, and signatures of the accused and witnesses are essential safeguards against tampering allegations.

B. Sealing and Sampling:

²⁵ Varinder Kumar v. State of Himachal Pradesh, (2020) 3 SCC 321.

²⁶ State of Punjab v. Baldev Singh, (1999) 6 SCC 172.

²⁷ State of Punjab v. Balbir Singh, (1994) 3 SCC 299.

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The next important step is sealing and sampling. You have to take representative samples from the seized material, seal them with material that can't be tampered with, and mark them with unique identifiers. Section 52-A says that sampling should be done with the help of a Magistrate, who will also check that the inventory and samples are correct. In Union of India vs. Mohanlal, the Supreme Court directed that prompt applications under S. 52-A should be moved to the Magistrate, who must certify the inventory and dispose of the bulk contraband expeditiously to avoid storage hazards and risk of pilferage.²⁸ Courts have consistently held that absence of clarity regarding who sealed the samples, what type of seal was used, or whether specimen seal impressions were preserved for future verification creates reasonable doubt. In Thana Singh vs. Central Bureau of Narcotics, the Court reiterated that strict sampling procedures must be followed to maintain evidentiary value.²⁹

C. Custody and Makhana Management:

As soon as the material is taken, it must be put in the right storage space (makhana). The makhana register must have the date and time of the deposit, as well as the seal number and a description of the entry. Custodians must make sure that the seal stays intact until the sample is sent to the forensic science lab (ESL).

In Jitendra vs. State of M.P., the Court acquitted the accused because the prosecution failed to produce the seized material in court and could not prove the integrity of custody.³⁰ Similarly, unexplained delays in sending samples to the laboratory, without contemporaneous documentation, have been held fatal.³¹ Courts expect the prosecution to prove each link in the custody chain with documentary corroboration.

D. Laboratory Analysis:

²⁸ Union of India v. Mohanlal, (2016) 3 SCC 379.

²⁹ Thana Singh v. Central Bureau of Narcotics, (2013) 2 SCC 590.

³⁰ Jitendra v. State of M.P., (2004) 10 SCC 562.

³¹ Ashok v. State of M.P., 2011 SCC OnLine MP 369.

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Laboratory analysis forms the scientific core of NDPS prosecutions. The FSL must confirm the presence and type of narcotic or psychotropic substance. However, the reliability of such reports depends on:

- 1. Accreditation and Standards:** International best practices require laboratories to be ***ISO/IEC 17025*** accredited, ensuring validated methods, quality controls, and measurement uncertainty disclosures.³² In India, many state FSLs operate without such accreditation, raising questions about reliability.
- 2. Representative Sampling:** Particularly in bulk seizures, courts insist that samples be drawn in a manner that is truly representative of the whole. Composite sampling methodologies, where a small portion is taken from each packet and mixed, are generally accepted, provided the procedure is documented.³³
- 3. Mixtures and Neutral Substances:** Post-Hira Singh, laboratories must consider the entire mixture weight but also record purity levels. Where carriers like cloth or packaging are included, courts have sometimes excluded them from being treated as “neutral substances.”³⁴
- 4. Transparency and Documentation:** Chain-of-custody forms must accompany samples, with signatures of dispatching and receiving officers. Reports should indicate intact seals on receipt. Failure to mention these details has led courts to reject FSL reports.

E. Courtroom Production and Proof:

Ultimately, the prosecution must “bring the science home” by connecting each forensic link in court. This requires:

- Producing the case property or inventory certificate under S. 52-A;
- Exhibiting the seizure memo, panchnama, specimen seal, and malkhana register;

³² UNODC, Guidelines on Drug Law Enforcement (2019).

³³ Ajmer Singh v. State of Haryana, (2010) 3 SCC 746.

³⁴ Hira Singh v. Union of India, (2020) 20 SCC 272; Ajay v. State of Delhi, 2021 SCC OnLine Del 1957.

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- Leading evidence from the FSL analyst, especially when methods or results are contested.
- Proving that seals on the samples tested match the specimen seal produced in court.

In *Hardip Singh vs. State of Punjab*, the Court held that where the link between seizure and laboratory report is not established beyond reasonable doubt, the accused is entitled to acquittal.³⁵ Thus, the forensic pipeline demands exacting compliance at every stage. Failures are not viewed as trivial technical lapses but as constitutional defects that undermine the presumption of innocence.

VI. CONSTITUTIONAL DIMENSIONS OF NDPS PROCEDURAL SAFEGUARDS:

The Indian Constitution must be read along with the NDPS Act. Parliament can make strict drug laws under Entries 19 and 59 of the Union List, but those laws must still follow the protections in Part III of the Constitution. The Supreme Court has repeatedly said that strict laws do not make it okay to take away people's basic rights.

A. Article 21: Fair Procedure and Proportionality:

Article 21 guarantees that no person shall be deprived of life or personal liberty except according to procedure established by law. The Court has interpreted this to mean "just, fair, and reasonable" procedure.³⁶ NDPS trials, given the high stakes of liberty, must therefore be conducted with strict fidelity to procedural safeguards.

In *Maneka Gandhi vs. Union of India*, the Court expanded the scope of Article 21 by reading it in conjunction with Articles 14 and 19, thereby establishing proportionality as a core test for the validity of laws curtailing liberty.³⁷ This principle has been repeatedly invoked in NDPS contexts. For instance, in *E. Michael Raj vs. Intelligence Officer*, the Court stressed

³⁵ Hardip Singh v. State of Punjab, (2008) 8 SCC 557.

³⁶ Maneka Gandhi v. Union of India, (1978) 1 SCC 248.

³⁷ Id.

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proportionality in sentencing by holding (at the time) that punishment must relate to the actual content of narcotic drug in a mixture, rather than the gross weight.³⁸ Although later overruled by *Hira Singh*, the judgment reflected a constitutional concern for proportionality in punishment. Article 21 also demands speed and fairness in trials. In *Thana Singh v. Central Bureau of Narcotics*, the Court expressed concern over prolonged incarceration of undertrials under NDPS, directing systemic reforms to reduce pendency and ensure timely forensic examination.³⁹

B. Article 20(3): Protection Against Self-Incrimination:

Article 20(3) provides that no person accused of an offence shall be compelled to be a witness against himself. The Court has interpreted this as protecting both testimonial compulsion and confessions elicited through coercion. For years, confessions under S. 67 of the NDPS Act were admitted against accused persons. However, in *Tofan Singh vs. State of Tamil Nadu*, the Court held that NDPS officers are “police officers” and therefore confessions made to them are inadmissible in light of S. 25 of the Evidence Act and Article 20(3).⁴⁰ This landmark decision realigned NDPS jurisprudence with constitutional protection against self-incrimination, compelling prosecutors to rely more heavily on independent forensic and documentary evidence.

C. Article 14: Equality and non-arbitrariness:

Article 14, while generally invoked to challenge discriminatory classifications, also prohibits arbitrary state action. In the NDPS context, courts have scrutinized whether disproportionate punishments, rigid bail restrictions, and presumptive clauses lead to arbitrariness. In *Noor Aga vs. State of Punjab*, the Court held that presumptions under S. 35 and 54 cannot arise unless the prosecution first establishes foundational facts, failing which the application of presumptions would be arbitrary and unconstitutional.⁴¹ Similarly, courts have found that non-

³⁸ E. Michael Raj v. Intelligence Officer, (2008) 5 SCC 161.

³⁹ Thana Singh v. Cent. Bureau of Narcotics, (2013) 2 SCC 590.

⁴⁰ Tofan Singh v. State of Tamil Nadu, (2021) 4 SCC 1.

⁴¹ Noor Aga v. State of Punjab, (2008) 16 SCC 417.

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compliance with procedural safeguards such as S. 50 or S. 52-A amounts to arbitrariness under Article 14, because it strips the accused of meaningful protection against false implication.

D. International Obligations and Comparative Law:

India is a signatory to the *Single Convention on Narcotic Drugs, 1961*, the *Convention on Psychotropic Substances, 1971*, and the *Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988*.⁴² These treaties obligate states to criminalize certain drug-related activities but also encourage respect for due process. UNODC guidance documents repeatedly highlight that effective drug enforcement requires reliable forensic procedures and protection of human rights.⁴³ Comparative analysis demonstrates similar concerns: U.S. federal courts have overturned convictions where the chain of custody was not proved beyond reasonable doubt,⁴⁴ while U.K. courts interpreting the Misuse of Drugs Act, 1971 emphasize the need for accredited laboratories and independent verification. By aligning NDPS procedural safeguards with constitutional mandates and international best practices, Indian jurisprudence affirms that forensic rigor and due process are not obstacles to enforcement but rather the foundation of legitimate convictions.

VII. POLICY RECOMMENDATIONS:

The doctrinal evolution of NDPS jurisprudence indicates a judicial emphasis on stringent adherence to statutory protections. However, repeated acquittals stemming from procedural deficiencies indicate that systemic vulnerabilities endure in enforcement practices. To make the forensic pipeline stronger while protecting people's constitutional rights, we need to make changes to the law, the government, and the courts.

A. Statutory Standard Operating Procedures (SOPs):

⁴² Single Convention on Narcotic Drugs, Mar. 30, 1961, 520 U.N.T.S. 151; Convention on Psychotropic Substances, Feb. 21, 1971, 1019 U.N.T.S. 175; United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Dec. 20, 1988, 1582 U.N.T.S. 95.

⁴³ UNODC, Guidelines on Drug Law Enforcement (2019).

⁴⁴ United States v. Lott, 854 F.2d 244 (7th Cir. 1988).

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One recurring issue in NDPS prosecutions is the absence of uniform procedures for search, seizure, and sampling. While the NDPS Act prescribes broad duties under S. 42, 50, and 52-A, there is no centralized, binding Standard Operating Procedure (SOP). As a result, investigative practices vary across states, leading to inconsistent judicial outcomes.

The Union government should frame detailed SOPs under S. 76 of the NDPS Act, covering:

1. **Recording Information:** Uniform templates for compliance with S. 42, including date, time, and superior officer acknowledgment.
2. **Search and Seizure:** Mandatory bilingual S. 50 notices, photographic/video documentation of seizures, and specimen seal preparation.
3. **Sampling and Sealing:** Protocols for representative sampling, tamper-proof sealing, and QR-coded identifiers.
4. **Chain-of-Custody Documentation:** Mandatory use of standardized chain-of-custody forms accompanying each transfer.

Comparable SOP frameworks exist in other jurisdictions. For instance, the U.S. Drug Enforcement Administration (DEA) has detailed manuals on evidence handling that could serve as models for Indian adaptation.⁴⁵

B. Digital Chain-of-Custody Systems:

The integrity of the chain of custody is often challenged due to manual record-keeping in malkhanas. Introducing **digital, tamper-proof systems** could minimize errors and opportunities for tampering.

Such systems should include:

- **QR-coded Seals:** Each sample packet tagged with a unique QR code linked to a centralized database.

⁴⁵ U.S. Dep't of Justice, Drug Enforcement Administration, Evidence Handling Manual (2020).

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- **GPS-Stamped Transfers:** Time-and-location stamping of every custody transfer.
- **Immutable Logs:** Blockchain-based or forensic software that prevents alteration of custody records.

Pilot projects in states such as Maharashtra have shown that digitalization of police evidence management reduces discrepancies and improves accountability.⁴⁶

C. Forensic Laboratory Accreditation:

Reliability of forensic science depends on quality assurance. Most state forensic laboratories in India lack ISO/IEC 17025 accreditation, raising questions about the scientific rigor of their reports. The National Forensic Sciences University (NFSU) and Directorate of Forensic Science Services (DFSS) should mandate accreditations for all NDPS-testing laboratories within a time-bound framework.

Accreditation would ensure:

- *Method validation (GC-MS, HPLC, FT-IR).*
- *Disclosure of measurement uncertainty.*
- *Participation in proficiency testing.*
- *Standardized reporting formats.*

Courts in several cases have expressed concern about the credibility of FSL reports in the absence of such safeguards.⁴⁷

D. Independent Sealing and Certification:

To address concerns about investigators being both informants and custodians, independent sealing officers should be designated at district or zonal levels. These officers would certify the sealing of samples post-seizure, reducing allegations of bias or manipulation.

⁴⁶ See Maharashtra Police, Digital Evidence Management Pilot Report (2021).

⁴⁷ Hardip Singh v. State of Punjab, (2008) 8 SCC 557.

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The model could be adapted from customs and excise practices, where sealing is conducted by officers not directly involved in the investigation. Judicial acceptance of independent certification would enhance the credibility of the prosecution's case.⁴⁸

E. Capacity Building and Training:

Investigative lapses often arise from inadequate training in forensic awareness. A comprehensive training program should be developed for police, Narcotics Control Bureau (NCB) officers, and prosecutors. Training modules should cover:

- Proper compliance with S. 42, 50, 52-A;
- Scientific sampling and sealing techniques;
- Courtroom presentation of forensic evidence;
- Understanding of constitutional mandates and judicial precedents.

The Bureau of Police Research and Development (BPR&D) could collaborate with NFSU to develop specialized NDPS training modules.⁴⁹

F. Judicial and Administrative Monitoring:

Finally, institutional monitoring mechanisms should be established to ensure compliance. High Courts could issue practice directions requiring trial courts to scrutinize chain-of-custody documentation at preliminary stages. Annual audits of malkhana management and NDPS trials could also be mandated.

In *Union of India vs. Mohanlal*, the Supreme Court had already issued directions for prompt disposal of seized narcotics under S. 52-A to prevent storage-related issues.⁵⁰ Expanding such judicially monitored reforms could further strengthen the system.

⁴⁸ Mohan Lal v. State of Punjab, (2018) 17 SCC 627.

⁴⁹ Bureau of Police Research & Dev., Annual Report 2022–23.

⁵⁰ Union of India v. Mohanlal, (2016) 3 SCC 379.

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VIII. CONCLUSION:

The NDPS Act of 1985 shows that the State is serious about stopping drug trafficking and that its laws are in line with its international obligations. But as this paper has shown, the Act's strength does not come from how harsh its punishments are, but from how reliable its procedures are. Courts have consistently emphasized that NDPS prosecutions require a higher standard of proof than typical criminal cases, specifically due to the statute's imposition of mandatory minimum sentences, restrictive bail conditions, and presumptions unfavourable to the accused.

This article has traced the statutory and judicial framework governing forensic evidence and procedural safeguards, highlighting the following key insights:

1. **Procedural safeguards are substantive guarantees.** Compliance with S. 42, 50, and 52-A is not a matter of technicality but of constitutional fidelity. Non-compliance undermines Article 21's guarantee of fair procedure and Article 14's prohibition of arbitrariness.⁵¹
2. **Forensic integrity is the backbone of NDPS prosecutions.** The chain of custody, from seizure to laboratory analysis, must be meticulously documented. Courts have acquitted accused where even minor doubts about sampling, sealing, or malkhana custody have arisen.⁵²
3. **Judicial vigilance has preserved constitutional values.** Through decisions such as *Baldev Singh, Jadeja, Noor Aga, and Tofan Singh*, the Supreme Court has recalibrated enforcement by insisting that constitutional safeguards override expediency.⁵³
4. **Policy reforms are essential.** Uniform SOPs, digital chain-of-custody systems, laboratory accreditation, and independent sealing officers are practical steps that can

⁵¹ *Maneka Gandhi v. Union of India*, (1978) 1 SCC 248; *Noor Aga v. State of Punjab*, (2008) 16 SCC 417.

⁵² *Jitendra v. State of M.P.*, (2004) 10 SCC 562; *Hardip Singh v. State of Punjab*, (2008) 8 SCC 557.

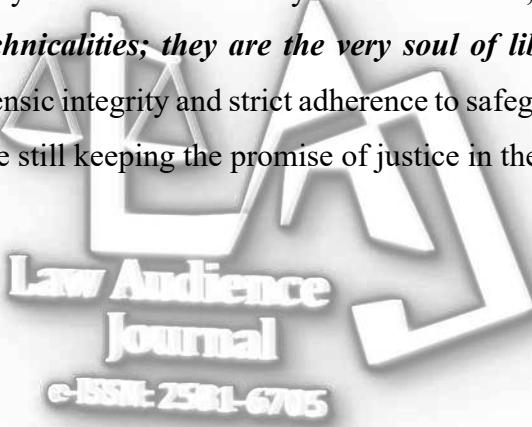
⁵³ *State of Punjab v. Baldev Singh*, (1999) 6 SCC 172; *Vijaysinh Chandubha Jadeja v. State of Gujarat*, (2011) 1 SCC 609; *Noor Aga v. State of Punjab*, (2008) 16 SCC 417; *Tofan Singh v. State of Tamil Nadu*, (2021) 4 SCC 1.

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strengthen enforcement without diluting rights. Capacity building of investigators and prosecutors is equally critical.

5. ***International alignment reinforces domestic legitimacy.*** UNODC guidelines and comparative practices in the U.K. and U.S. demonstrate that robust forensic protocols and rights-based safeguards are hallmarks of credible drug law enforcement.⁵⁴

Ultimately, the NDPS regime stands at a crossroads. A system that prioritizes convictions at the expense of procedure risks delegitimizing itself through frequent acquittals. Conversely, a system that balances scientific rigor with constitutional due process can achieve both deterrence and legitimacy. As Justice Krishna Iyer once remarked, "*The guarantees of fairness are not procedural technicalities; they are the very soul of liberty.*"⁵⁵ If the NDPS Act is enforced with strict forensic integrity and strict adherence to safeguards, it can serve its purpose of deterring crime while still keeping the promise of justice in the Constitution.



⁵⁴ UNODC, Guidelines on Drug Law Enforcement (2019); United States v. Lott, 854 F.2d 244 (7th Cir. 1988); Misuse of Drugs Act, 1971 (U.K.).

⁵⁵ Sunil Batra v. Delhi Administration, (1978) 4 SCC 494.