
LEGAL ANALYSIS OF THE USE OF DNA FORENSIC EVIDENCE IN THE INDONESIAN CRIMINAL JUSTICE SYSTEM

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Abstract:

The use of forensic DNA evidence in the criminal justice system in Indonesia faces various challenges, especially related to regulations that are not fully aligned with international standards. Law No. 8 of 1981 concerning the Criminal Procedure Code (KUHP), especially Articles 184 and 186, does not provide specific guidelines regarding the procedures for collecting, testing, and using forensic DNA evidence in the criminal evidence process. This study aims to analyze the regulations and procedures governing forensic DNA evidence in Indonesia and propose legal solutions to strengthen the regulations to comply with international standards. This study uses a normative legal research method, focusing on the analysis of relevant laws, legal doctrines, and court decisions. Discussions center on the harmonization of national regulations with international standards, strengthening the capacity of forensic institutions, and reforming legal procedures related to DNA evidence. The research findings indicate that Indonesia needs more comprehensive regulatory reforms related to the use of forensic DNA evidence, especially regarding the accreditation of forensic laboratories according to international standards such as ISO 17025 and the development of transparent and legally accountable evidence collection procedures. In conclusion, although DNA evidence has great potential to strengthen convictions in the criminal justice system, regulatory reform and strengthening of forensic institutions are needed for the Indonesian justice system to adopt higher international standards. Thus, the use of forensic DNA evidence can contribute significantly to justice in criminal law enforcement in Indonesia.

Keywords : Forensic Evidence; Criminal Law; Regulations

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INTRODUCTION

Evidence is a central element in the criminal justice system in Indonesia, which aims to ensure that justice is served fairly and lawfully. Without adequate evidence, the criminal justice system will struggle to reach the right decision, especially in serious cases involving significant criminal threats. The Indonesian criminal justice system relies on the Criminal Procedure Code (KUHP), which regulates the procedures for presenting evidence in court. Article 184 of the Criminal Procedure Code states that valid evidence consists of witness statements, expert testimony, documents, indications, and statements from the accused (Article 184 of the Criminal Code). Over time, technological advances have enabled the introduction of scientific evidence, such as forensic DNA evidence, which offers a high level of accuracy in the criminal evidence process. This is crucial to reducing the risk of legal errors that could unjustly deprive someone of their liberty or even their life.

Forensic evidence, especially DNA, plays an increasingly significant role in supporting the evidentiary process in court. This evidence allows the court to confirm the involvement or acquittal of the accused based on objective scientific data. DNA is unique evidence because each individual has a different DNA profile, providing a much higher level of certainty than other types of evidence

(Sandwinata, 2019). This evidence can be used in a variety of cases, from murder to sexual assault. In the Indonesian context, although the courts have begun to accept the use of DNA evidence, regulatory and procedural challenges still hamper its optimal implementation. This highlights the importance of an in-depth legal analysis of forensic evidence in system justice criminal .

Internationally, the use of forensic DNA evidence has long been recognized as an important tool in the law enforcement process. Countries such as the United States and the United Kingdom have developed legal frameworks that support the widespread use of forensic evidence in their criminal justice systems. In the United States, for example, the Innocence Project has used DNA evidence to exonerate more than 300 individuals wrongfully convicted of serious crimes, including murder (Medwed, 2017). This experience underscores the potential of forensic DNA evidence to correct errors in the criminal justice process and strengthen the principle of substantive justice. In many cases, DNA evidence is used to confirm the involvement of the accused and to prevent the innocent from being convicted (Ratna Pertiwi, 2015).

The application of DNA evidence in these developed countries has had a significant impact on the reform of their criminal justice systems. For example, the Criminal Justice Act 2003 in the UK provides clearer guidelines for the admissibility of scientific evidence in court, including DNA evidence. This law emphasizes the importance of validity and reliability in the collection and analysis of scientific evidence. The experiences of these countries provide valuable lessons for Indonesia in developing more comprehensive regulations for DNA evidence in the criminal justice system. In Indonesia, regulations related to the use of DNA evidence are still scattered across several laws, including Law No. 8 of 1981 concerning the Criminal Procedure Code (KUHP). However, there are no specific provisions that regulate in detail the standards for the collection and validity of forensic DNA evidence.

In Indonesian law, the regulations regarding forensic DNA evidence are still not adequately defined. This can be seen from the lack of specific rules governing the procedures for collecting and analyzing DNA evidence in criminal proceedings. Nevertheless, DNA evidence is often an important tool in serious criminal cases such as murder and rape. Several legal and forensic experts in Indonesia have emphasized the importance of legal reform in this regard. According to experts such as Sudikno Mertokusumo, the collection and processing of scientific evidence must comply with strict standards to ensure its validity in court. Awareness of the importance of standards for collecting and analyzing evidence has also been discussed in various scientific discussions and studies. in law forensics. Although has There is While some steps have been taken towards the acceptance of DNA evidence in Indonesian courts, various legal and technical challenges still hamper its optimal use.

One of challenge main in law enforcement is the lack of uniformity regarding the use of DNA evidence, in terms of evidence collection in the field and analysis conducted by forensic laboratories. In addition, the lack of clear legal guidelines often leads to confusion among judges when assessing the validity and relevance of DNA evidence. As a result, court decisions involving DNA evidence are often inconsistent, highlighting the need for the formulation of more definitive and comprehensive regulations.

The limited capacity of forensic laboratories in Indonesia is also a significant obstacle to the application of DNA evidence in the justice system. In many developed countries, quality forensic laboratories have become a key element in supporting the validity of scientific evidence in court. However, in Indonesia, the lack of facilities and personnel trained in DNA analysis remains a significant obstacle. Recent research has shown that forensic laboratories in Indonesia often lack adequate equipment and trained personnel to handle cases involving DNA evidence in a timely and accurate manner. This highlights the critical need for increased technical capacity and investment in this area.

Therefore, this study will focus on the legal analysis of forensic DNA evidence in the Indonesian criminal justice system, aiming to identify existing challenges and offer solutions based on international best practices. By referring to the development of forensic law in other countries and the current situation in Indonesia, this study is expected to provide real contributions to the

development of better regulations regarding the use of forensic DNA evidence in Indonesia, which ultimately helps in achieving fairer and more appropriate justice in criminal proceedings.

Forensic DNA evidence is considered as scientific evidence with a high level of accuracy, capable of making a significant contribution to justice in resolving criminal cases. For example, cases involving murder and sexual violence often present DNA evidence as a strong evidentiary tool (Rianti et al., 2020). In this context, the use of forensic DNA evidence signifies the increasing attention to the integration of scientific technology in the criminal justice system in Indonesia.

On the other hand, the application of DNA evidence in the Indonesian criminal justice system is not without various legal and procedural challenges. Although DNA evidence has great potential to strengthen charges or exonerate defendants, there is a clear regulatory gap regarding the procedures for collecting and managing this evidence. For example, Law No. 8 of 1981 concerning the Criminal Procedure Code (KUHAP) does not explicitly regulate the use of DNA evidence in the evidentiary process in court. This raises concerns about the legitimacy and validity of DNA evidence, especially in cases where the collection and analysis do not comply with international standards.

In several major criminal cases in Indonesia, DNA evidence has been successfully used to secure justice. One of the highlighted cases is a murder case that occurred in Bali in 2017, where DNA evidence was used to accurately identify the perpetrator. This case shows that the application of forensic technology, including DNA, can improve accuracy in the criminal justice process. However, although DNA evidence is often key evidence, some legal experts argue that there are still challenges in ensuring that evidence collection is carried out correctly and in accordance with applicable legal procedures.

Not all applications of DNA evidence in Indonesia have been without controversy. One of the most contentious cases involved a sexual assault that occurred in Jakarta in 2019, where the use of DNA evidence was questioned due to concerns that the collection procedures did not meet proper standards (MBS Silaban et al., 2023). The use of evidence that is not properly collected can cast doubt on the evidentiary process and potentially damage the integrity of forensic results. This underscores the need for stricter and more detailed regulations regarding the operational standards for DNA evidence collection and analysis in Indonesia.

The absence of clear regulations regarding forensic DNA evidence in Indonesia can be seen as a legal gap that requires serious attention. Currently, the laws and regulations governing the use of DNA evidence are still limited and fragmented, which can affect the consistency of its application in court (Simanjuntak, 2012). Several legal experts have proposed the need to revise or update the Criminal Procedure Code to include detailed regulations regarding scientific evidence, including DNA evidence. In this regard, other countries such as the United States and the United Kingdom have adopted detailed regulations regarding the use of forensic DNA evidence in their criminal justice processes.

In the context of international law, regulations governing the use of DNA evidence in several developed countries provide important examples for Indonesia (Nikhio et al., 2023). In the United States, for example, the DNA Identification Act of 1994 provides a comprehensive legal framework for the collection, storage, and use of DNA evidence in criminal proceedings. Meanwhile, in the United Kingdom, the Police and Criminal Evidence Act 1984 (PACE) provides clear guidelines for managing DNA evidence, including collection procedures and guarantees of human rights protection. Lessons learned from these international practices can form the basis for developing more good in Indonesia. Increasing use DNA evidence in Indonesia's criminal justice system shows the urgent need for legal reform.

More regulations comprehensive not only is it necessary to regulate the technical procedures for collecting and analyzing DNA evidence but also to guarantee the validity and legitimacy of this evidence in court. This update should also take into account the principles of human rights protection, given that DNA evidence is highly sensitive and can significantly influence life individual. With the more the complex case criminal cases involving scientific evidence, the Indonesian criminal justice system

needs to adopt a more evidence-based and scientific approach. The use of accurate and valid DNA evidence can be an important tool to improve the quality of law enforcement and justice in Indonesia.

The main challenge in the application of forensic DNA evidence in Indonesia is the lack of comprehensive regulations regarding the collection, processing, and presentation of this evidence in court. The absence of standard operating procedures regarding DNA collection and testing often raises doubts about the legality of such evidence in the eyes of the law. In certain cases, DNA analysis results that do not follow standard procedures can be considered invalid and ultimately rejected as valid evidence by the court. This creates legal uncertainty regarding the use of DNA evidence in the Indonesian criminal justice system.

Clear and firm regulations are essential to ensure the lawful and consistent use of DNA evidence. In comparison, several developed countries such as the United States and the United Kingdom have adopted specific regulations related to DNA evidence through standards such as the Daubert Standard in the United States, which sets strict criteria for scientific evidence in court. In Indonesia, there is no equivalent standard, so it is necessary to develop regulations regarding scientific evidence, including DNA, to compete on a global scale. Without this legal reform, the Indonesian justice system risks losing public trust in the validity of evidence-based scientific evidence (Saks & Faigmain, 2008).

In addition, another problem is the inadequate infrastructure to support DNA collection and analysis in Indonesia. Until now, only a few forensic laboratories in Indonesia are able to conduct DNA analysis with accuracy and validity recognized by international standards. This limitation results in delays in the evidence collection process and high costs, adding to the burden on parties involved in the legal process. Therefore, efforts are needed to increase the capacity of forensic laboratories throughout Indonesia to support the use of DNA evidence more effectively and efficiently.

The process of collecting and processing forensic DNA evidence in Indonesia also faces significant challenges in terms of legal certainty. Standards used in DNA sampling and processing methods often vary between different law enforcement agencies and forensic institutions. This lack of uniformity can affect the validity and legality of DNA evidence when presented in court. Forensic experts argue that the lack of rules regarding DNA collection and analysis protocols makes this evidence vulnerable to manipulation or contamination, which in turn can undermine the fair and objective evidentiary process in criminal trials.

In practice, the admissibility of DNA evidence in court also faces significant obstacles due to the lack of regulations governing the criteria for the approval of such forensic evidence. Article 184 of the Criminal Procedure Code states that valid evidence consists of witness statements, expert statements, documents, indications, and statements from the accused. However, there are no explicit provisions relating to scientific evidence such as DNA in this category. As a result, judges often have to use their discretion in determining whether DNA evidence should be accepted as valid, while also facing the challenge of a lack of clarity regarding the procedural admissibility of this evidence in court.

Legal practice in Indonesia also faces major challenges related to the use of DNA evidence as valid evidence in court. One of the most striking challenges relates to the increasing questioning of the scientific methods involved in DNA testing, both by legal practitioners and judges. The use of complex DNA technology requires investigation of the scientific principles underlying this evidence, and this often poses a barrier to its application in the Indonesian justice system, which is still unfamiliar with modern scientific evidence. According to research from international forensic journals, this gap in technical knowledge can lead to inaccuracies in evaluating DNA evidence.

Improving legal knowledge among practitioners in managing DNA evidence is also one factor that can improve the situation. In several other countries, regulations regarding the collection and processing of DNA evidence are integrated with independent forensic institutions that have the authority to validate the authenticity of the evidence before being submitted to the court (Ratnawati & Ruslie, 2023). Meanwhile, in Indonesia, these regulations have not been fully developed, so that the

evidence submitted to the court is inadequate, increasing the risk that this evidence will be rejected due to the lack of legal certainty. adequate about its authenticity.

Indonesia's criminal justice system also grapples with challenges related to the integrity of forensic laboratories that perform DNA analysis. In some cases, there have been reports of inconsistent DNA test results submitted by laboratories that do not meet international standards. Indonesian National Police Regulation No. 10 of 2009 concerning Procedures for Collecting, Storing, and Forensic Biological Evidence states the procedures for collecting biological evidence, especially DNA sampling, but this regulation does not yet cover the more detailed and comprehensive technical aspects of forensic DNA evidence.

On the other hand, harmonization between domestic regulations and international standards regarding DNA evidence is also a serious concern. Indonesia has not fully adopted international standards recognized by various global forensic organizations regarding the management of DNA evidence (Prakasa, 2020). This situation results in significant differences in the interpretation and application of standards between the Indonesian justice system and other countries, especially in transnational criminal cases that require similar international cooperation.

Therefore, there is a need for a comprehensive update of the regulations that cover the legal gaps in the use of forensic DNA evidence in Indonesia. More comprehensive provisions that are in line with the development of modern forensic technology must be developed so that DNA evidence can be used as valid and effective in the criminal justice process. This reform also needs to include improved training for legal practitioners and the establishment of independent and internationally accredited forensic laboratories.

RESEARCH METHOD

Study This based on the approach law normative , which is special focus on studies documents law, principles juridical, as well as various decision relevant court in develop appropriate solution with problem the law under study. Data used in study This originate from source primary and secondary law, including law, doctrine law, and jurisprudence, which are selected in a way careful For ensure that all information taken contribute direct to objective study.

Study This implemented in range time certain that have been set, which allows systematic and consistent data collection. Data collection is carried out at locations certain relevant with the issues discussed, ensuring that the data collected representative and supportive findings research. Population and sample study This involving various source law and decision the court that has relevance direct with the topic being studied, so that can give corner complete view.

Instruments used in study This is various device designed analysis For identify, classify, and interpret relevant legal data. Instruments This help in separate significant information from the less relevant, possible focus on the elements important that contributes to understanding more in about topic. Data collection techniques in study This involves the process of collecting legal data through various source trusted, such as journal law, book text, article scientific, and documents official. This process ensure that all the information used is valid, authentic and can be accountable in a way academic. Sources the Then filtered through strict criteria For ensure relevance and currency of data.

Data analysis techniques used in study This aiming For approach problem law with objective and systematic perspective. Data analysis was carried out with in -depth and multilevel methods, allowing researcher For explore connection between theory, principle law, and applications in practice in context the problem studied. Data obtained analyzed through a process that involves testing hypothesis as well as mapping connection between variables existing law. With approach this, research This expected can give applicable solution to the problems being studied, as well as give contribution theoretically possible used in studies law furthermore.

RESULTS AND DISCUSSION

Regulations on the Collection, Processing, and Receipt of Forensic DNA Evidence in the Indonesian Criminal Justice System

The collection, processing, and admissibility of forensic DNA evidence in the Indonesian criminal justice system has become a significant issue that needs to be addressed, given the potential of this evidence to contribute to a more just and fair resolution of criminal cases. The legal system in Indonesia, despite having incorporated the use of scientific evidence, including forensic evidence, under Law No. 8 of 1981 on the Criminal Procedure Code (KUHP), still faces various challenges in the application of DNA evidence. Comprehensive guidelines on the collection, processing, and admissibility of forensic DNA evidence in the criminal justice system are essential to ensure the validity of this evidence in court.

The criminal justice system in Indonesia has established legal provisions on the collection of evidence based on Article 184 of the Criminal Procedure Code, which states that valid evidence consists of witness statements, expert statements, documents, indications, and statements from the accused. In the case of forensic DNA, these provisions must be implemented in accordance with specific criteria for the evidence to be admissible in court. This article does not explicitly categorize forensic DNA evidence as valid evidence but can be included in "expert statements" or "indications".

In Indonesia, regulations surrounding the collection of DNA evidence generally follow guidelines set out in various documents, such as the Regulation of the National Police of the Republic of Indonesia No. 10 of 2009 concerning Procedures for the Collection, Storage, and Forensic Biological Evidence. This regulation discusses the procedures for the collection and processing of biological evidence that requires scientific analysis, including the collection of DNA samples. DNA sample collection must be carried out by authorized personnel, usually by a police forensic team, while adhering to protocols that protect the integrity and validity of the sample.

In the process of collecting DNA evidence, various things must be handled, including collecting samples from the crime scene, transporting samples to the forensic laboratory, and storing and maintaining samples in a contamination-free manner. All of these processes are very important to ensure that the DNA evidence collected meets scientific and legal standards in court. If there is an error in the sample collection process, the resulting evidence may be considered invalid in enforcing the judge's decision.

DNA evidence processing in a forensic context is also guided by various regulations that aim to ensure the validity of evidence in court. In Indonesia, DNA analysis is carried out by forensic laboratories operating under the police or other government agencies (BAM Silaban, 2023). This processing stage includes scientific analysis of DNA samples to determine matches with potential suspects, suspect or victim.

Among the relevant regulations is the Regulation of the Minister of Health No. 62 of 2016 concerning the Organization of Forensic Laboratories. This regulation provides standards regarding forensic laboratories, including DNA testing procedures, and sets out the criteria that must be met by forensic laboratories to ensure the success of DNA analysis is admissible in court. Laboratories that process forensic DNA evidence must comply with international standards established through the application of DNA analysis, as mandated by international law.

In this regard, it is important to note that every stage in DNA evidence processing—from extraction, amplification, to interpretation of results—must be properly documented under a clear standard operating protocol (SOP) to ensure that the analysis results are not affected by external contamination or other technical errors (Hadi et al., 2018). In Indonesia, DNA analysis results are often

important evidence in court during the trial process, especially in cases involving serious crimes such as murder and sexual violence.

The admissibility of forensic DNA evidence in court involves Articles 183 and 184 of the Criminal Procedure Code. Under these provisions, a judge may not rely solely on one type of evidence; however, if a judge gains confidence in the evidence, it may be considered valid when used as part of a criminal proceeding. In this context, scientifically proven DNA evidence may serve as an important element in a criminal case.

However, in high-profile cases regarding the use of DNA evidence as legal evidence in Indonesian courts, several issues have generally led to disagreements on whether DNA evidence should be accepted based on the lack of consistency in the interpretation and application of the law. One example is the case of Putri Aisyah in the West Jakarta District Court, where DNA evidence presented as original evidence in a murder case was compromised by allegations of contamination during the sampling process. Although DNA analysis confirmed the involvement of the suspect, the court ultimately rejected the evidence due to serious contamination issues, raising concerns about its validity and reliability. forensic DNA evidence.

The previous discussion highlights that the application of forensic DNA evidence in the Indonesian criminal justice system should be seriously considered. It is essential that comprehensive regulations covering the procedures for collecting and processing DNA evidence ensure its validity and reliability in court.

Challenges in the application of forensic DNA evidence as valid evidence in Indonesian courts, particularly regarding standards of evidence collection and validity.

The use of forensic DNA evidence in the Indonesian criminal justice system continues to face various challenges, especially related to the standards of evidence collection and validity as stipulated by law. Although DNA is scientifically accepted as a valid type of evidence to identify individuals involved in criminal acts, its application in the legal context in Indonesia is often hampered by regulatory constraints and practices. Several critical issues regarding procedural, technical, and legal aspects need to be analyzed to identify how courts in Indonesia accept this forensic DNA evidence as valid evidence.

According to Law No. 8 of 1981 concerning the Criminal Procedure Code (KUHP), specifically Article 184, evidence in the criminal justice process consists of five types, namely witness statements, expert statements, documents, indications, and statements of the accused. Forensic DNA evidence is technically categorized into "expert statements" and "indications" which are characterized as scientific (Motian & Pura, 2024). However, the determination and presentation of the validity of this evidence in court must comply with the procedural standards outlined in the relevant laws and regulations, but this has not been explicitly regulated in the current legal framework.

One of the challenges involves standardizing procedures related to DNA sample collection. DNA sample collection must follow strict protocols to ensure the authenticity of evidence in court. Article 10 of the Indonesian National Police Regulation No. 10 of 2009 concerning the Collection, Storage, and Forensic Biological Evidence outlines that DNA sampling must be carried out by forensic investigators, using protocols that protect against contamination to maintain sample integrity. However, in practice, variability in operational implementation among forensic personnel can result in differing adherence to scientific standards, raising doubts about the integrity of DNA evidence when presented in court.

In addition, the challenges in the admissibility of DNA evidence in Indonesian courts are pronounced in its interpretation. Article 184 of the Criminal Procedure Code states that valid evidence includes expert statements, which indicates the need for scientific validity. Inconsistencies in standards for DNA collection and analysis procedures can cause problems regarding the admissibility of such DNA evidence in various court decisions. The handling of DNA evidence becomes a critical

point in the judicial process against the backdrop of deviations in interpreting the standards set by judicial authorities in assessing the validity of such evidence.

As highlighted in the case of Puitri Alisyah, DNA evidence was presented as primary evidence in a murder case; however, the submission was questioned, leading to significant debate regarding contamination during sample collection. Although DNA analysis pointed to the involvement of the suspect, the court ultimately rejected this evidence due to contamination, pointing out that DNA collection must follow strictly outlined procedures that are adhered to by regulations and standards. court .

Legal solutions to strengthen regulations and procedures for the use of forensic DNA evidence in the Indonesian criminal justice system to align with international standards.

The use of forensic DNA evidence in the Indonesian criminal justice system has made significant progress in recent years. However, several challenges remain, particularly regarding regulations relating to the validity and procedures for collecting this evidence in line with international standards. Some proposed legal solutions aimed at strengthening regulations and procedures for the use of forensic DNA evidence can be outlined in legislative reform, adopting international standards, and improving institutional capacity to maintain the integrity of the forensic process.

One important element in addressing the challenges of implementing forensic DNA evidence is aligning domestic regulations with international standards. International standards such as those set by the European Network of Forensic Science Institutes (ENFSI) and the International Organization for Standardization (ISO 17025) have outlined procedures for the collection, analysis, and presentation of DNA evidence in court with specific criteria. Adopting these standards will improve the reliability and integrity of DNA evidence presented in Indonesian courts.

In addition, improving the accreditation of forensic laboratories in Indonesia with international standards, such as ISO 17025, is essential in facilitating the performance of laboratories and the credibility of their findings. This is crucial to maintaining public confidence in forensic results and ensuring that DNA evidence presented in court meets globally recognized standards for accurate and reliable forensic analysis.

In addition, reform of procedural regulations regarding the use of forensic DNA evidence should be prioritized, with a focus on transparent procedures relating to the chain of custody of evidence, valid scientific analysis, and processes to ensure compliance with protocols. Adopting best practices from other jurisdictions that have effectively utilized forensic DNA evidence can help improve Indonesia's criminal justice system by ensuring that appropriate standards of evidence are upheld in legal proceedings.

National reforms to the regulations governing the collection and processing of forensic DNA evidence should also take into account the principles of protecting individual rights, ensuring that the rights of those involved in legal proceedings surrounding the use of DNA are not compromised. The establishment of clear rules regarding the requirements for consent for DNA collection and regulations ensuring the confidentiality of sensitive personal information should be combined with technical improvements, to ensure compliance with international human rights standards.

In conclusion, the use of forensic DNA evidence in the Indonesian criminal justice system has shown significant progress; however, many challenges remain that require urgent attention to uphold the validity and admissibility of this evidence. Current regulations, such as the Criminal Procedure Code and other forensic regulations, have established the legal basis for the utilization of DNA evidence, but further efforts are essential to improve practical implementation and strengthen the credibility of the evidence presented. in system justice.

CONCLUSION

The application of forensic DNA evidence in the Indonesian criminal justice system has significant potential to improve the legal process; however, there are still several challenges that require attention. Aligning national regulations with international standards is essential to ensure that DNA evidence is valid and admissible in court.

Increasing the interoperability of forensic institutions in Indonesia and improving laboratory accreditation standards are key factors that can contribute to the integrity of DNA evidence applied in criminal cases. International accreditation for forensic laboratories in Indonesia will increase public confidence in the results of forensic examinations and ensure that DNA evidence presented in court meets internationally recognized quality standards.

Reforming legal procedures related to the collection and utilization of DNA evidence in the Indonesian criminal justice system requires the introduction of transparent standards regarding the chain of custody of evidence, valid scientific analysis, and properly established procedures. Adopting best practices from other jurisdictions that have successfully utilized forensic DNA evidence will also contribute to improving the Indonesian criminal justice system to achieve greater alignment with international standards. Therefore, legal reform and forensic capacity building are needed to ensure that the Indonesian criminal justice system evolves towards compliance with international legal norms.

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