

Editorial

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In the ever-evolving landscape of forensic science, the disciplines of forensic chemistry and toxicology stand out for their critical contributions to criminal justice, public health, and safety. As we navigate through the complexities of modern forensic investigations, it becomes imperative to acknowledge both the remarkable advancements and the persistent challenges that define our field. As we publish this issue of the Journal of Forensic Chemistry and Toxicology, we invite our readers to explore the diverse array of research articles, reviews, and case studies that reflect the current state and future directions of our field. Together, let us continue to push the boundaries of forensic science and strive for excellence in our pursuit of truth and justice.

In this edition through the article "**Stature Estimation from Foramen Magnum Measurements in North Indian Population using Postmortem Multidetector Computed Tomography**," the author presents a novel approach to stature estimation using the dimensions of the foramen magnum in the North Indian population. By employing postmortem multidetector computed tomography (MDCT), the authors provide a non-invasive and precise method for forensic anthropologists and pathologists. This research not only enhances the accuracy of biological profiling in forensic cases but also underscores the importance of population-specific standards in forensic analysis.

Through the article "**Forensic Examination of Paint Samples using Thin Layer Chromatography, Fourier Transform Infrared Spectroscopy, and Atomic Absorption Spectroscopy**," the writer explores the combined use of thin-layer chromatography (TLC), Fourier transform infrared spectroscopy (FTIR), and atomic absorption spectroscopy (AAS) to characterize paint samples. The integration of these techniques offers a comprehensive analytical framework, improving the reliability and discriminatory power of forensic paint analysis.

Through the article "**Comparative Analysis of DNA Extraction Techniques and Their Analysis from Blood-Stained Clothes**", the author compares various DNA extraction techniques to determine their efficacy in retrieving genetic material from blood-stained clothes. By evaluating the yield, purity, and quality of DNA obtained, the authors provide valuable insights that can guide forensic practitioners in selecting the most effective methods for processing biological evidence in criminal cases.

Through the article "**¹H-NMR based Metabolic Fingerprinting in Forensic Investigations**", the author highlights the potential of proton nuclear magnetic resonance (¹H-NMR) spectroscopy in metabolic fingerprinting for forensic purposes. The authors demonstrate how ¹H-NMR can be used to identify and quantify metabolites in biological samples, providing a powerful tool for forensic toxicologists. The study emphasizes the role of metabolic profiling in detecting substance abuse, poisoning, and other forensic toxicology applications.

In the review article "**Flavored Hookah Abuse: An Alarming Toxicity of Concern among Youths**", the increasing popularity of flavored hookah among youths poses significant public health concerns. This review article examines the toxicological implications of hookah smoking, focusing on the harmful effects of flavoring agents and the associated risks of addiction and disease. The author calls for heightened awareness and regulatory measures to address this emerging health threat to youth health.

The Case Report "**Natural Death Turned Unnatural**", details a seemingly natural death that, upon further forensic investigation, revealed elements of foul play. The authors discuss the investigative process, the forensic evidence gathered, and the conclusions drawn, highlighting the importance of thorough forensic examinations in uncovering hidden truths.



In the case report "**Don't Cry Over Spilled Milk: A Case Report on Intoxicating Mystery for Forensic Chemistry**", the authors unravel a perplexing case of intoxication involving a seemingly innocuous substance-milk. Through meticulous chemical analysis, the forensic team identifies the presence of an

intoxicant, demonstrating the critical role of forensic chemistry in solving unusual poisoning cases.

We hope these contributions will inspire further research and collaboration, ultimately enhancing our ability to serve justice and public safety.

