

Applications

A highly important usage of the chemical processes extraction and purification can be found within the forensics field, specifically upon the identification of a perpetrator or victim's DNA. Upon the identification of an evidence sample in a crime scene, any DNA attached may be further enhanced through an extraction and elution process. The desired DNA is first transferred into a solution through the use of enzymes, which break up the DNA into its specific amino acid sequences as to separate them from any present impurities. This separated solution is then dissociated and isolated, either in another solution or through binding to an absorbent solid. The separated DNA solution is then further eluted into purified DNA, as to effectively remove any lingering trace impurities (Promega Corporation, n.d.). This process allows for cleaner, easier DNA identification within forensics, an effective advantage due to the greater chance for specific characteristics or even entire identities of perpetrators or victims to be uncovered.

Reference

Promega Corporation. (n.d.). *DNA Purification* . Retrieved from Promega:
<https://www.promega.ca/resources/guides/nucleic-acid-analysis/dna-purification/#dna-purification-basics-610cd142-f329-4aa2-8446-8ddd6c7f02ab>