

Cocaine Base Identification and Quantification

REFERENCE: Elsherbini SH: Cocaine base identification and quantification; *Forensic Sci Rev* 10:1–12; 1998.

ABSTRACT: Cocaine free base (cocaine base) identification and quantification are not trivial matters as they may appear to those who are experienced with the analysis of cocaine samples. The presence of adulterants in most cases often causes the interconversion problem, which changes the compositions of cocaine base and cocaine salt in the sample. This problem may be avoided by a purification procedure which can be applied to mixtures of cocaine and most common adulterants. This procedure is based on differences in dissociation constants (pKa) among the components of the mixture. Since the infra-red (IR) spectra of cocaine base and the hydrochloride forms are significantly different, IR procedure is the most suitable method for cocaine base identification. A method for quantification of the components of a mixture of bases and hydrochloride forms of cocaine and adulterants is also reviewed.

KEY WORDS: Adulterate, cocaine, cocaine base, cocaine salt.
