Classification: Stimulant

Background: Cocaine is a naturally-occurring anesthetic with vaso-constrictive properties and is a potent central nervous system stimulant. As a local anesthetic, cocaine is used in 1%-4% solutions for eye procedures and 10%-20% solutions for nose and throat procedures. It is self-administered as a drug of abuse in doses of 10–200 mg.

Legal Use: Cocaine is still used as a local anesthetic. Medicinal cocaine use is rarely found outside hospital settings because of the high potential for abuse, the difficulty of maintaining the license to store cocaine and the availability of suitable substitutes. Cocaine is not contained in any prescription medications from a pharmacy or in any over-the-counter medications. As late as 1986 an herbal tea sold under the name of "Health Inca Tea" contained enough cocaine to cause positive urine test results. The DEA continues to seize herbal teas containing cocaine.

Street Names: Blow, Coke, Crack, Flake, Snow

Modes of Use: Snorting, intravenous injection, free-base (crack) smoking

Appearance: White Powder

Metabolism and Detection Time in Urine: In the body cocaine is rapidly converted to benzoylecgonine and ecgonine-methyl-ester, which are eliminated in the urine. Only a small fraction of the parent cocaine is eliminated in the urine, and its detection time following use is short compared to the cocaine metabolites. The presence of benzoylecgonine is accepted evidence of cocaine use and can be detected in the urine for as long as 2–5 days after use.

Bodily Effects: Desirable effects of cocaine include euphoria, weight loss, and sexual stimulation. Prolonged and intense use can lead to paranoia, hallucinations and violent behavior. The central nervous system stimulation (rush) is followed by depression (crash). This rush and crash cycle is the principle reason for the development of chronic cocaine abuse.

Cutoff Levels:
- Immunoassay screen test: 300 ng/mL
- LC-MS/MS confirmation test (benzoylecgonine): 150 ng/mL

Interpretation of Results: A positive urinalysis result for cocaine indicates cocaine use. Commonly used local topical anesthetics such as lidocaine, novocaine and benzocaine are structurally unrelated to cocaine and its metabolites and do not result in a positive immunoassay or LC-MS/MS response. There are no known medications that cause a false positive immunoassay or LC-MS/MS response. Studies have shown that although cocaine can be absorbed through the skin, even intense exposure is insufficient to cause a positive urine test result.

Toxicity: Direct cardiotoxic effects may be the contributory factor in cocaine-induced deaths.