

The Analytical Scope and Sensitivity of Forensic Toxicological Testing of Urine in Drug-Facilitated Crime Investigations, First Edition, 2021



WHAT IS AN AAFS STANDARD FACTSHEET?

The AAFS produces clear, concise, and easy to understand factsheets to summarize the contents of technical and professional forensic science standards on the OSAC Registry. They are not intended to provide an interpretation for any portion of a published standard.

WHAT IS THE PURPOSE OF THIS STANDARD?

The investigation of drug-facilitated crimes is very challenging and requires specialized forensic toxicological testing for a wide breadth of drugs of relatively low detection limits.

Urine is typically the specimen of choice because it may provide the ability to detect drug exposure for up to 120 hours (5 days) from the alleged incident.

This standard establishes the various substances that the laboratory must be able to identify in urine (scope of testing), as well as the appropriate level of testing (sensitivity) that is required.

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

Adherence to the standard ensures that the toxicological testing performed in urine is sufficient and suitable for the investigation of potential drug-facilitated crimes.

The standard provides direction to the investigative community regarding forensic toxicology testing and informs laboratories of the expectations required of them.

Forensic toxicology laboratories are encouraged to meet these minimum standards.

HOW IS THIS STANDARD USED AND WHAT ARE ITS KEY BENEFITS?

Requirements for analytical testing of urine for drug-facilitated crime investigations are specified in the standard. This includes laboratory tests for alcohol, drugs, and drug metabolites that are more commonly associated with this type of investigation.

The thresholds or minimum concentrations are based on the scientific literature for possible urine concentrations from a single dose of the drug.

This is a minimum standard of practice, which means that additional tests beyond those required in the standard may be necessary. Regional drug trends and case history should be considered to determine if additional drugs or substances should be included in the scope of testing.

The standard focuses on urine testing since that is typically the specimen of choice. If the urine is collected within 120 hours of the incident, it shall be tested. Laboratories shall also have procedures to address testing in other specimens, such as blood, hair, or vomitus, when applicable.

Laboratories that cannot meet the standards internally may use external resources to meet the requirements (e.g., outsourcing, partnerships).

