

## The Analytical Scope and Sensitivity of Forensic Toxicological Testing of Urine in Drug-Facilitated Crime Investigations



### 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 a forensic science service provider (FSSP) 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 promotes the performance of sufficient and suitable toxicological testing in urine when investigating potential drug-facilitated crimes.

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

FSSPs providing forensic toxicology services are encouraged to meet this standard.

### 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 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 standard of practice. 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. FSSPs shall also have procedures to address testing in other specimens, such as blood, hair, or vomitus, when applicable.

FSSPs that cannot meet this standard internally may use external resources to meet the requirements (e.g., outsourcing, partnerships).

