

## Guidelines for Opinions and Testimony in Forensic Toxicology, First Edition, 2019



### 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?

Expert opinions, both written and oral, can hold tremendous weight in the criminal justice process. Therefore, it is critical that these opinions are based upon sufficient facts, appropriate data, sound scientific principles, and validated methods.

Experts should be consistent in their opinions, be clear in the information they use to formulate those opinions, and ensure that assumptions, as well as limitations are effectively communicated.

The guidelines contained in this best practice recommendation apply to both criminal and civil legal matters involving forensic toxicology.

### WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

This best practice recommendation is important because it provides a framework for how written and oral opinions are offered in legal matters related to forensic toxicology. It also provides examples of appropriate and inappropriate opinions and testimony by a toxicologist.

Understanding these limitations can help attorneys develop appropriate questions for direct or cross examination in accordance with the best practice recommendations.

It can also assist forensic science service providers improve expert witness training programs.



### HOW IS THE STANDARD USED AND WHAT ARE THE KEY ELEMENTS?

This best practice recommendation provides guidance for forensic toxicology opinions and testimony in the areas of impaired driving, drug facilitated crimes, postmortem forensic toxicology, non-regulated employee drug testing, court ordered toxicology (e.g., probation and parole, drug courts, child services), and general forensic toxicology (e.g., non-lethal poisonings or intoxication).

The guideline recommends key information to be included in a written expert toxicological opinion report, including that the opinion(s) may change if new information becomes available.

Examples of what is generally considered appropriate opinions or testimony are provided, including ethanol extrapolation calculations, the context of a reported drug concentration (e.g., therapeutic or lethal), and the general effects of a particular substance.

Examples of what is generally considered inappropriate opinions or testimony by a toxicologist include absolute cause of death or cause of an accident, behavioral intent or individual degree of impairment based solely on a drug concentration, calculating a dose based on postmortem drug concentrations, or back extrapolation for drugs (other than ethanol).

The words "scientific certainty" or "reasonable degree of scientific certainty" should be avoided.

