

ExploreHEALTHCareers.org

Do something that matters. For yourself. For others.

Forensic Toxicologist

Overview

Forensic toxicologists perform scientific tests on bodily fluids and tissue samples to identify any drugs or chemicals present in the body.

As part of a team investigating a crime, a forensic toxicologist will isolate and identify any substances in the body that may have contributed to the crime, such as:

- alcohol
- illegal or prescription drugs
- other chemicals
- poisons
- metals
- gases, such as carbon monoxide

Working in a lab, the forensic toxicologist performs tests on samples collected by crime scene investigators. They use highly sophisticated instruments, chemical reagents and precise methodologies to determine the presence or absence of specific substances in the sample.

The work requires patience and the ability to follow specific steps to achieve reliable results. The forensic toxicologist must document every step of the process, and take care to follow rules regarding chain of custody for physical evidence.

The field of forensic toxicology has grown to include drug testing for employers and traffic enforcement officials, testing of animal samples for wildlife criminal investigators, testing for “date rape” drugs and performance-enhancing substances.

Forensic toxicologists also work on cases involving environmental contamination, to determine the impact of chemical spills on nearby populations.

Investigators rely on the forensic toxicologist to make reliable conclusions about the impact a specific amount of a specific substance would have on a specific individual. Often, this requires the professional to form an educated opinion based on science and experience.

If asked to testify in court, the forensic toxicologist must be prepared to justify that opinion and to explain complex methodologies in terms a jury can understand.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

Most forensic toxicologists work in labs run by law enforcement agencies, medical examiners or private drug testing facilities. They often must sit or stand for long periods of time. The tests they perform require very fine motor skills and a dogged commitment to following rigorous scientific protocols.

Working with bodily fluids and tissue samples can be messy and smelly. The forensic toxicologist is also exposed to details about often heinous crimes, which can cause mental anguish.

The workload can be significant, and when the samples come from a crime scene, the pressure to perform tests faster can be strong. The forensic toxicologists must be able to resist this pressure, work efficiently without rushing, and prioritize effectively.

Academic Requirements

The science of forensic toxicology is constantly advancing.

The best candidates for a career in the field will be individuals who are sincerely fascinated by the effects chemicals can have on the human body. Keeping pace with new technologies, new methodologies - and new chemicals - demands constant learning.

A forensic toxicologist generally has a bachelor's degree in chemistry, clinical chemistry, pharmacology or another scientific field. Some universities now offer masters degrees and even PhDs in forensic toxicology. Be sure any program you choose is accredited by the American Academy of Forensic Science.

Professionals who have several years of experience in the field can obtain certification from [The American Board of Forensic Toxicology](http://www.abft.org/) (<http://www.abft.org/>), [The American Board of Clinical Chemistry](http://apps.aacc.org/abcc/) (<http://apps.aacc.org/abcc/>) and the American [Board of Toxicology](http://www.abtox.org/) (<http://www.abtox.org/>).

Professional Associations

[American Academy of Forensic Science](http://www.aafs.org/) (www.aafs.org) [The Society of Forensic Toxicology](http://www.tiaft.org/)

[The International Association of Forensic Toxicologists](http://www.tiaft.org/) (http://www.tiaft.org)

Funding Opportunities

[Search for funding opportunities in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Enrichment Programs

[Search for enrichment programs in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Source

fsi.research.wvu.edu

Learn more about this field:

[Forensic Science](http://www.explorehealthcareers.com/en/Field.22.aspx) (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$34,527 - \$64,578

Years in school: 4 - 8 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201