

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Exposure Assessment Program works with partners in industry, labor, trade associations, professional organizations, and academia. The program focuses on promoting the use of 21st century exposure assessment sensors, methods, and processes.

What do we do?

- Develop guidance for how to conduct exposure assessments in all types of occupational settings. Exposure assessments help identify who is exposed, how they are exposed (air, water, skin contact), how much exposure occurs, how often, and the duration of exposure.
- Develop new or improved sensors for assessing exposure to make it easier and quicker to identify and measure exposures.
- Develop new or improved assessment methods to ensure that exposure measurements are accurate and able to detect lower levels of agents in the workplace.

What have we accomplished?

- Published NIOSH Manual of Analytical Methods (NMAM) Method 0501, "Particulates Not Otherwise Regulated," which accurately measures nuisance dusts.
- Published NMAM Method 5100, "Carbon Black," which more accurately measures the fine carbon powder that can be found in the air when petroleum products are not completely burned.
- Published NMAM Method 8319, "Acetone and Methyl Ethyl Ketone in Urine." These two chemicals are used in a wide variety of industrial processes.
- Published NMAM Method 8322, "Trichloroacetic Acid in Urine," which detects a metabolite of trichloroethylene that occurs from inhaling this industrial solvent or swallowing trichloroethylene-contaminated water.
- Published a method on a new sensor for hazardous drug exposure. It enables rapid

assessment of unknown spills of hazardous drugs in the pharmacy or treatment areas of healthcare facilities. Current methods to measure for spills can take weeks to analyze, but this new sensor checks for hazardous drugs in just a few minutes, so workers can be protected sooner.

- Published guidance on using biomarkers of effect to set occupational exposure limits. This is one of a series of NIOSH documents to understand factors that can or cannot be reliably used to assess risk and set standards.
- Published NMAM method 7306, "ELEMENTS by Cellulosic Internal Capsule Sampler and ICP-AES." It uses an analyzable filter insert to improve reporting accuracy for 33 elements by collecting material that may have adhered to the sampler wall and making that material available for analysis.

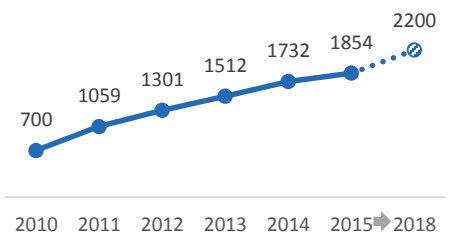
What's next?

- Refine the NMAM method for total isocyanates, at OSHA's request. Isocyanates are potent irritants and sensitizers which are increasingly used in the automobile industry, for auto body repair, and in insulation for buildings. Current methods underreport isocyanate levels, and a refined method will more accurately assess exposure levels.
- Publish guidance on exposome research to help epidemiologists understand the multitude of exposures an individual has over a lifetime, and how exposures may affect current or future health.
- Publish an update of the NIOSH Occupational Exposure Sampling Strategy Manual.

At-A-Glance

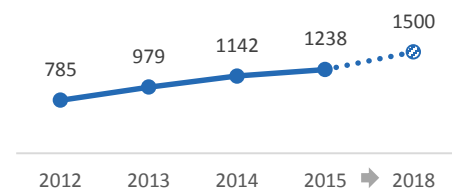
The Exposure Assessment Program provides national and international leadership in the development and use of effective exposure assessment tools to prevent work-related illness and injury. This snapshot shows recent accomplishments and upcoming work.

Cumulative web downloads of "Genetics in the Workplace" guidance document



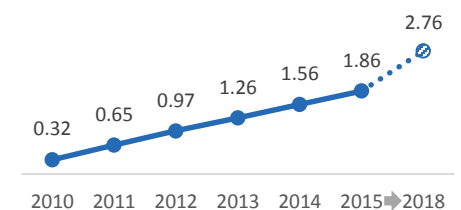
Source: NIOSH program records

Cumulative web downloads of "Direct-Reading Monitors for Gases and Vapors" guidance document



Source: NIOSH program records

Cumulative web downloads of NIOSH Manual of Analytical Methods (NMAM) (in millions)



Source: NIOSH Program Records