

NIOSH Publishes Technical Report on Occupational Exposure Sampling for Engineered Nanomaterials

Article By:

Lynn L. Bergeson

Carla N. Hutton

On July 29, 2022, the National Institute for Occupational Safety and Health (NIOSH) published a [Technical Report: Occupational Exposure Sampling for Engineered Nanomaterials](#). Since 2010, NIOSH has developed guidance for workplace sampling for three engineered nanomaterials: [carbon nanotubes \(CNT\) and nanofiber \(CNF\)](#), [silver](#), and [titanium dioxide](#), each of which has an elemental mass-based NIOSH recommended exposure limit (REL). NIOSH has also developed a practical approach to exposure sampling for other engineered nanomaterials that do not have exposure limits. According to NIOSH, occupational health and safety professionals “have expressed a need for one document that explains all of the available nanomaterial sampling techniques, and this document provides a summary of the different sampling techniques.” The document includes recommendations for an exposure monitoring program, CNTs and CNFs, silver, titanium dioxide, use of the nanomaterial exposure assessment technique for other engineered nanomaterials, and optional sampling methods. NIOSH concludes that a comprehensive exposure assessment evaluation for engineered nanomaterials collects information that can be used to identify sources of potential engineered nanomaterial exposures; establish similar exposure groups by area or job tasks; characterize exposures of all potentially exposed workers; and assess the effectiveness of engineering controls, work practices, personal protective equipment (PPE), training, and other factors used in reducing exposures. NIOSH states that using a combination of these techniques can provide an in-depth characterization of potential occupational exposure to engineered nanomaterials. This information is then available for incorporation into risk management strategies to minimize worker exposure to engineered nanomaterials and confirm ongoing control of risk.

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