

WASTE WORKERS

Occupational exposure to microorganisms as related to new waste sorting instructions and the associated reduced frequency rate of waste collection

Due to the reduced frequency rate in which specific types of waste (e.g. plastic, cardboard, bio-waste) nowadays are collected, combined with rising temperatures, an increased growth can be expected in the number of microorganisms and changes in the microbial community in this waste. Furthermore, with the expanded sorting of waste, workers at sorting plants come into closer proximity of this waste.



Therefore, to address health concerns associated with this new waste management process, it is necessary to assess the worker's exposure and the inflammatory and infective potential at hand. There also is a potential risk of spreading antibiotic resistant isolates of microorganisms from the waste to the working force and multi-exposure with microbial and chemical agents. National studies on this subject are now ongoing in different countries. It is important to compile and review the results obtained.

/// OBJECTIVES

The project will:

- exchange and develop knowledge in this area
- review the literature
- point towards solutions on how to reduce waste workers' bioaerosol exposure

/// TARGET GROUPS

This study will be of practical and societal relevance for: persons working with waste collection and waste sorting, OSH services for waste workers, authorities of waste workers, researchers, engineering consultants and OSH professionals.

/// RESULTS

- Review paper concerning occupational exposure to bioaerosols and volatile compounds associated with waste handling; the focus will be on effects of the new sorting systems at household, company, and sorting plant level
- Presentation of activities of the working group on the PEROSH webpage
- Popular presentation as a brief summary of the paper

/// RELEVANCE

As there is no concerted e.g. European effort within the area of 'waste workers exposure and associated health effects' and as most of the national studies are rather small, it is important to exchange knowledge and to publish the obtained knowledge.

Globally, a large number of people handle waste and exposure to microorganisms is considered as an occupational health problem. In Europe, we produce about 6 tons of waste per person per year. As of 2015, EU member states are obliged to separately collect paper, glass, metal, and plastic to foster high-quality recycling of these materials. The procedures have now been adopted by nearly all member states.

As a consequence of waste sorting at household or company level, the waste collection frequency rate is usually reduced for several types of waste. Consequently, workers involved can be exposed to waste that is more contaminated with microorganisms. Additionally, some types of waste are sorted at specialized waste sorting plants which would lead to exposure to higher levels of microorganisms.



/// RESEARCH TEAM

This PEROSH project is developed between the following institutes: National Research Centre for the Working Environment (NFA, Denmark), Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA, Germany), Central Institute for Labour Protection–National Research Institute (CIOP-PIB, Poland), National Institute of Occupational Health (STAMI, Norway), Finnish Institute of Occupational Health (FIOH, Finland), Austrian Worker's Compensation Board (AUVA, Austria), Health & Safety Executive (HSE, United Kingdom), The National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases (INRS, France) and Institute for Work and Health (IST, Switzerland)



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