

Environnement Humain/EHU-12

Swiss nanoinventory "results of the pilot study"

¹Schmid K., ¹Riediker M.

Institut universitaire romand de santé au travail, Lausanne, groupe "particules et santé"¹

Nanoparticles are particles smaller than 100nm in at least two dimensions. They are more and more used in novel industrial applications taking advantage of the new properties of this material. Therefore there is an urgent need to evaluate the risks of these particles to ensure their safe production, handling, use, and disposal, since a large number of different types of nanoparticles and applications are currently being developed and introduced into industrial processes and consumer products. Studies about type and quantity of industrially used manufactured nanoparticles and the exposure to them are insufficient in Switzerland.

A qualitative telephone survey was conducted among two hundred Swiss companies to evaluate the nanoparticle applications in Swiss industries with regard to types and quantities of nanoparticles, protective measures and numbers of potentially exposed workers. Swiss companies were found applying the following nanoparticles in considerable quantities (tons per year): Ag, AlO₃, Fe-Ox, SiO₂, TiO₂ and ZnO₂. Applications were identified in the following fields: coating, cosmetics, food (animal feed, sport food and food packing), metal, optics, paintings, powder production, surface treatment, and research laboratories. This pilot study showed that nanoparticles are not fiction but already reality in the Swiss industry and it allowed an identification of industrial sectors with an established nanoparticle-use. It gave us valuable information about the knowledge of production and safety managers, and will form the basis for a detailed inventory, which eventually will be an essential element for the risk evaluation and prevention strategies regarding nanoparticles and health.



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ENA	Environnement Naturel
EHU	Environnement Humain
GEN	Gènes et Environnement
IMI	Immunité et Infection
MCV	Métabolisme et Cardiovasculaire
NEU	Neurosciences et Psyché
ODE	Oncologie et Développement
THE	Procédures Thérapeutiques

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