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IMPROVING WORKPLACE PREVENTION ASSOCIATED TO NANOPARTICLES : THE NEEDS OF CONSIDERING UNCERTAINTIES

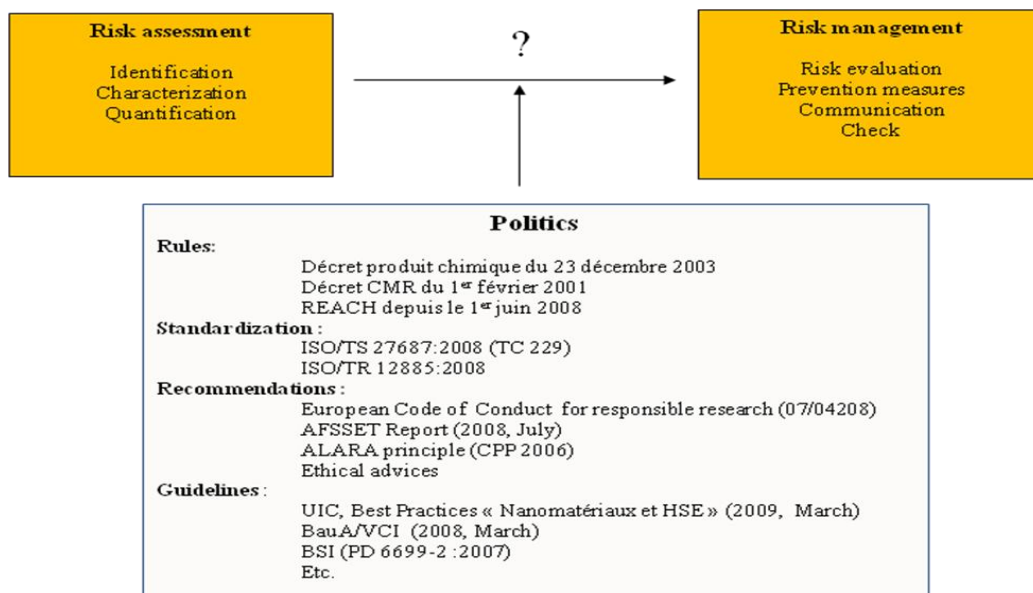
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In companies, prevention about occupational risks associated to nanoparticles is connected neither to the nature of materials nor their amount handled. Despite progress in knowledge about risks or protection, prevention is concerned by many questions. The lack of consensus regarding nanomaterials definition or toxicity criteria, by example, let persist uncertainties. In this context, which refers to precaution, the prevention measures are very varied but not always quite correct.

A comparative study between exposure assessment, risk assessment and risk management in work places shows that the prevention choices are based on scientific reasoning as much as political or social reasoning. The corporate social responsibility is involved. So prevention depends on perceived risks associated to nanomaterials in general. It's interesting to note that perceived risks are integrated in occupational risk management: not only, it's a special need of the new forms of risks to health or environment (postpone, non observable, controversial...) but also it's a determining variable of success (or failure) in decision making about prevention.

However, the prevention ways are affected by taking into account uncertainties in risk management : solutions implementation partake less of experts, top-down programs and a priori knowledge, than specific communication regarding construction process of risks and perceptions (emotional, individual and collective dimensions...).

Our study about risk management and prevention practices associated to nanoparticles is developed in partnership with INRS and CNRS-PACTE Laboratory ("Public politics, politic ACTION and TERRitory", UMR CNRS/IEP/UPMF/UJF 5194, Grenoble) since 2010. It established an interdisciplinary approach that includes ergonomics, sociology, chemistry and physics. It is based on workplace and risk management observations compared to exposure assessment in companies and organizations all along the life cycle of nanomaterials (researchers, producers, users of nanoparticles). Without waiting for permanent knowledge about risks linked to nanoparticles, the aim of our study is to describe risk assessment and management and their evolution according to nanomaterials and handling or using operations. Our study offers to collect experience feedback on occupational risk management and to create a network about nanoparticles risks prevention.



Frame of principles and practices in occupational health and safety management about NPs