Press release

THE DANGERS OF EVERYDAY NANOMATERIALS

Research carried out on everyday products such as textiles and printer ink has shown that they may be releasing nanomaterials into the environment. The FP7 project NANOSOLUTIONS aims to test a variety of products and build up a database of the nanomaterials they contain and their level of safety.

The word on everyone's lips right now is 'nano' – make it smaller, make it seamless and build it from the molecule up, but with nanomaterials in everything from sunscreen to printer ink, how safe are they really?

Looking to find out the answer to this is NANOSOLUTIONS, an FP7 project based in Finland. In a recent conversation with Insight Publishers, Dr Socorro Vázquez-Campos, leader of the Safety and Sustainability research group at LEITAT Technological Centre in Barcelona, revealed the work they have been doing to ascertain the safety of everyday products.

The main focus of Dr Vázquez-Campos' work is life cycle analysis. This involves studying the release of nanomaterials from products when used in existing applications or industrial processes throughout their life cycle.

One example of such a product is printer ink, which contains quantum dots and other nanomaterials. The researchers set up a standard household printer inside a sealed box in order to measure whether materials were being released into the air. During the process it was observed that ENMs (engineered nanomaterials) were released from the process and/or from the paper sheets, with airborne nanoparticles collected during and after the process containing a high concentration of quantum dots and other particles of a different nature.

Another case study involved commercial nano-enabled sportswear and their potential to release nano-additives during the washing process. They studied a number of different washing cycles and a variety of commercial washing products and analysed what each type of textile released into the water. The results showed a significant release of ENMs during washing, and that the textiles had undergone transformations such as ionisation, nucleation and aggregation.

All of the data from this project will be collated into what is known as the ENM Safety Classifier, a computer programme that can predict an ENM's ability to cause health or environmental hazards from its properties that is being developed by the NANOSOLUTIONS consortium. With many new products now containing nanomaterials, the ENM Safety Classifier will be an indispensable tool for manufacturers and researchers, allowing them to easily predict the possible dangers of a given nanomaterial.

For more on Nanosolutions see **www.nanosolutionsfp7.com**

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