Current uses of nanomaterials in biocidal products and treated articles in the EU

Nanomaterials (NMs) are currently being used for a wide variety of products, and a number of them are utilized as biocides due to their antimicrobial or antifungal properties. Little is known to what extent these biocides are available on the market as consumer products. In the EU, the Biocidal Product Regulation (BPR) lays out a list of requirements that manufacturers of biocidal products have to comply with before they can place their products on the market. It is not entirely clear which commercially available articles in the EU have been treated with or incorporate NMs to provide biocidal properties to the product. To obtain an insight into what biocidal products are on the EU market, we used The Nanodatabase (nanodb.dk) for analyzing which NMs are being used and what product categories they represent. In this paper, we address the issue of the current uses of NMs in biocidal products and discuss how they are currently regulated under the BPR. Even though the BPR already entails nanospecific provisions, correct labelling of biocidal products containing NMs is virtually non-existent. By using The Nanodatabase, it was possible to identify 88 biocidal products containing NMs available on the EU market, none of which had the specific labelling required by the BPR. The analysis of biocidal products pinpoints the challenges and limitations for obtaining a reasonable overview of the current uses of NMs in biocidal products as defined in the BPR.