

NanoDefine – How to find out if your product falls under the EC definition of nanomaterial

Stefan Weigel

RIKILT – Wageningen UR, Akkermaalsbos 2, 6708 WB Wageningen

The NanoDefine project is set up to establish analytical tools and guidance on their use that support the implementation of the EC recommendation on the definition of a nanomaterial. It undertakes a comprehensive evaluation of existing methodologies, innovates instruments and software and develops validated measurement methods that are robust, readily implementable, cost-efficient and capable of reliably measuring the size and numbers of particles in the range of 1 - 100 nm and above, with different shapes, coatings and a wide range of chemical composition, in industrial materials and consumer products. Practical case studies will assess their applicability for various sectors, including pigments and fillers, food, cosmetics.

One major outcome of the project will be the establishment of an integrated tiered approach including rapid screening methods (tier 1) and sophisticated methods for complex samples (tier 2), with a manual to guide end-users, such as material manufacturers, regulatory bodies and contract laboratories, to implement the developed methodology. A final product will be the NanoDefiner e-tool: a decision framework including a standardised semi-automated procedure for the selection of appropriate methods and material classification (nano/non-nano) according to the definition. Selected methods will be validated in interlaboratory studies and submitted as work items to become standard methods under CEN or ISO.

NanoDefine thus provides tools and guidance to support innovators and manufacturers to conduct a reliable and cost-efficient classification of both innovative and legacy materials, e.g. for registration under REACH or other regulations.