

## **NanoDefine - An integrated analytical approach to implement the EC definition of nanomaterial**

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The NanoDefine project is set up to establish the measurement tools and scientific data that will help to implement the EC recommendation on the definition of a nanomaterial. It undertakes a comprehensive evaluation of existing methodologies and a rigorous intra-laboratory and inter-laboratory comparison, to develop validated measurement methods and instruments that are robust, readily implementable, cost-effective and capable of reliably measuring the size of particles in the range of 1 - 100 nm, with different shapes, coatings and for the widest possible range of chemical composition, in industrial materials and consumer products. Practical case studies will assess their applicability for various sectors, including pigments, food, cosmetics etc.

One major outcome of the project will be the establishment of an integrated tiered approach including validated rapid screening methods (tier 1) and validated in depth methods (tier 2), with a user manual to guide end-users, such as 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 method performance studies and submitted as work items to CEN or ISO.

Following an introduction to the goals and concept, an overview on the so far achieved results in the areas of material selection, comparative techniques evaluation, method and instrument development as well as technique selection, decision support and classification will be presented.