

EU Offers Standard Definition of Nanotechnology

October 25, 2011 by [Sean Wajert](#)

One of the challenging aspects of attempts to regulate emerging nanotechnology is the definition. Proposing a "definition" for nanotechnology is [not as straightforward a process](#) as it may seem; applying a strict, universal definition of nanotechnology to all applicable fields and products may not be an appropriate science-based approach. Inclusion of nanometer-sized active ingredients or excipients in a product does not by itself determine a product's safety and efficacy (i.e. size alone is not always itself an indicator of toxicity). Then there is the issue of distinguishing between engineered nanomaterials and those naturally occurring at the nanoscale.

Last week, the European Commission took [another step](#) in this debate, unveiling a new, [common nanomaterial definition](#) as a basis for regulation. Nanomaterials are defined as those whose main constituents measure between 1 and 100 billionth of a meter; that is, a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the target size range.

Thus, the new EU definition is based on an approach that considers the size of the constituent particles, rather than any other indicia of potential risk. The EU did note that there is [no evidence](#) that nanomaterials are inherently hazardous. Technological development and scientific progress continue with great speed, noted the report. The definition including descriptors will therefore be subject to a re-review by December 2014. In particular, the review will assess whether the number size distribution threshold of 50 % should be increased or decreased and whether to include materials with internal structure or surface structure in the nanoscale such as complex nano-component nanomaterials including nanoporous and nano-composite materials that are used in some product sectors.