Business and industry

FENAC is able to offer a custom service to help manufacturers and distributors comply with the global regulatory development for nanoparticles. Please contact us so that we can tailor the service to your needs.

We have the ability to characterise and interpret the physico-chemical properties of nanoparticles from all sources, including size, aggregation properties, surface behaviour, dissolution and morphology.

Helping you to comply with existing and upcoming policy

Defining Nanomaterials

Defining what is classed as a nanoparticle is a key part of regulation.

The European Commission in 2011 proposed a definition that defined a nanomaterial as comprising at least 50% of particles measuring between 1 and 100 nanometers

The International Council of Chemical Associations (ICCA) has worked with the global Chemical Industry to agree on a more harmonised nanomaterial definition based on weight concentration. Their definition of a nanomaterial is:

- 1. Solid, particulate substances
- 2. Intentionally manufactured at the nano-scale
- 3. Consisting of nano-objects with at least one dimension between 1 and 100nm on the basis of ISO
- 4. And their aggregates and agglomerates
- 5. With a weight based cut-off of either:
 - 10 wt.-% or more of nano-objects as defined by ISO or
 - 50 wt. -% or more of aggregates / agglomerates consisting of nano-objects.

While revision of the REACH regulation to include nanomaterial criteria has yet to be implemented FENAC can look at **Particle size**, **Particle Number** and **Particle Size Distribution** to see if materials are likely to be defined as nanomaterials when regulation is in place.

Cosmetics Regulation

In 2010 regulation on the use of Nanomaterials in cosmetics entered into force. Any cosmetic product containing nanomaterials must notify the EU Commission including information on:

- 1. Identification of the nanomaterial
- 2. Specification including size of the nanomaterial, physical and chemical properties
- 3. The quantity to be placed on the market per year
- 4. Toxicological profile
- 5. Safety data
- 6. Reasonably foreseeable exposure conditions

FENAC offers a wide range of analysis that can help meet these requirements from basic physical and chemical properties such as **metal concentrations**, **surface charge** and **crystal structure** to looking at **interactions between nanoparticles and environmental and biological material**.

Tailored Nanomaterials

FENAC is also able to create tailored nanomaterials for research purposes.

Initial enquires to be directed to Marian Jordan, m.a.jordan@bham.ac.uk (mailto:m.a.jordan@bham.ac.uk)

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