



A Focus on Standardisation

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Written, consensual standards play a vital role within commerce and society by providing agreed ways of naming, describing and specifying things, validated ways of measuring and testing things, and optimum ways of managing and reporting things. Standards provide part of the infrastructure which supports a technology, not inhibiting its growth but allowing it to grow unimpeded by misunderstanding and disagreements. In emerging areas of technology, the early development of standards provides a common framework through which technologists can pursue their goals safe in the knowledge that their efforts will be recognised, understood and accepted by their peers.



Standardization activities in nanotechnologies provide a prime example of these activities, where both national and international standards are being developed to support the burgeoning market and societal demands in this new area of technology. In the national arena, the BSI committee for nanotechnologies, NTI/1, is currently preparing 6 sector specific terminology documents for:

- Medical, health and personal care applications of nanotechnologies;
- The bio-nano interface;
- Carbon nanostructures;
- Nanofabrication;
- Nanomaterials;
- Common nanoscale measurement terms, including instrumentation

and three guides, to

- Labelling of manufactured nanoparticles and products containing manufactured nanoparticles
- Safe handling and disposal of manufactured nanoparticles
- Specifying manufactured nanomaterials

all of which will be published before the end of the year. Plans are being prepared for the development of new national nanotechnology standards in areas such as human and ecotoxicology testing, nanometrology, nanomaterials, product and risk assessment.

Internationally, the ISO technical committee, ISO/TC 229 - Nanotechnologies, has a dynamic work programme covering the areas of terminology and nomenclature (working group 1 -



WG1), measurement and characterization (WG2) and health, safety and the environment (WG3). NTI/1 was instrumental in the establishment of this committee in June 2005. The UK holds both the chair - the chair of NTI/1 - and the secretariat. It hosted the first meeting of the new committee in November 2005, submitted the first new work item proposal ? terminology and definitions for nanoparticles, and has provided leadership roles in task groups for roadmapping and for identifying the work programme for WG2. UK experts are participating in the majority of the 12 work items so far approved for development, and will participate in all relevant future work items, provided resources are available.

Currently, ISO/TC229 WG3 is developing standards for:

- Safe Practices in Occupational Settings Relevant to Nanotechnologies
- Endotoxin test on nanomaterial samples for in vitro test systems? Endotoxin test on nanomaterial samples for in vitro test systems
- Monitoring silver nanoparticles in inhalation exposure chambers for inhalation toxicity testing
- Guidance on physico-chemical characterization of engineered nanoscale materials for toxicologic assessment.

As a key member of NTI/1 and ISO/TC 229/WG3, the IOM is actively participating in defining and preparing standards for protecting the health of current and future workers in, what is predicted to be, one of the most important engines for growth in the 21st century.

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