

ISO and IEC Standards for Nanotechnologies

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ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) have been developing standards for nanotechnologies since 2005. The specific technical committees, ISO/TC229 and IEC/TC113, operate with experts participating from up to 40 member countries and over 30 liaison bodies.

Nanotechnology is an enabling technology, crossing conventional boundaries between physics, chemistry, biology, mathematics, information technology, and engineering. Nanotechnology promises significant social benefits, including enhancements in medical diagnosis and treatment, more efficient energy sources, lighter, stronger and cheaper materials and electronic products, cleaner, cheaper water, and many other applications

Standards play a critical role in ensuring that the full potential of nanotechnology is realized and that nanotechnology is safely integrated into society. Standards aid growth in productivity by supporting innovation, value generation, compliance and regulation.

ISO/TC229, *Nanotechnologies*, has the following objectives, through international standards development to 1) support the sustainable and responsible development of nanotechnologies; 2) facilitate global trade in nanotechnology-enabled products and systems; 3) improve quality, safety, security, consumer and environmental protection, together with the rational use of natural resources; and 4) promote good practice in the production, use and disposal of nanomaterials and nano-enabled products.

IEC/TC113 *Nanotechnology standardization for electrical and electronic products and systems* covers standardization of components, intermediate assemblies, products, and systems created from nano-scaled materials and processes with attention to properties and function electrical or electro-optical in nature, including assessment of performance, reliability, and durability in support of continuous improvement at all stages of the value adding chain.

An overview of ISO and IEC standards development in nanotechnologies is provided by the International Secretary for one Working Group of ISO/TC229 / IEC/TC113 (JWG1, Terminology and Nomenclature – Nanotechnologies). The presenter is also the Administrator for Canada's national committees to ISO/TC229 and IEC/TC113.

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