

Current Developments in New Zealand on the Safety of Manufactured Nanomaterials

Highlights of developments since the 2nd meeting of the WPMN

- There has been no significant developments in New Zealand since the 2nd meeting of the WPMN

Work completed, underway or planned

1. Any national regulatory developments on human health and environmental safety including recommendations or discussions related to adapting existing regulatory systems or the drafting of laws/ regulations/ guidance materials

It has been established that if a nanomaterial has a known hazard or risk, there are regulatory systems in place in New Zealand that can regulate, eliminate or manage this hazard or risk. Depending on the circumstance in how the nanomaterials is used or poses a threat, a nanomaterial would be regulated under:

- the Hazardous Substances and New Organisms (HSNO) Act 1996 by the Environmental Risk Management Authority (ERMA);
- the Health and Safety in Employment (HSE) Act 1992, by the Department of Labour;
- the Food Act 1981, via the NZ (Maximum Residue Limits of Agricultural Compounds) Food Standards Code 2007¹, and the Australia New Zealand Food Standards Code², by the NZ Food Safety Authority.

The legislation in the above Acts is sufficiently broad enough to include manufactured nanomaterials, and covers the majority of the potential exposure pathways of manufactured nanomaterials.

ERMA intends to establish over the next 18 months or so a formal position on the regulation of nanomaterials under the HSNO Act. Specific data requirements for the risk assessment of nanomaterials will be developed which will take into account international harmonisation efforts on regulatory requirements for nanomaterials.

Further information on the HSNO Act and ERMA is available from:

<http://www.mfe.govt.nz/issues/hazardous/>
<http://www.ermanz.govt.nz/index.html>

2. Developments related to voluntary or stewardship schemes

There are currently no voluntary or stewardship schemes.

3. Information on any risk assessment decisions

¹ <http://www.nzfsa.govt.nz/policy-law/legislation/food-standards/nz-mrl-fs-2007-consolidation.pdf>

² <http://www.foodstandards.gov.au/thecode/foodstandardscode.cfm>

ERMA has not received any applications to import or manufacture a hazardous substance that contains manufactured nanomaterials. There have not been any applications to allow residues of nanomaterials in foods.

4. Information on any developments related to good practice documents

Cosmetics containing nanoparticles (other than zinc oxide or titanium dioxide³) must be notified to ERMA as a condition of the Cosmetic Products Group Standard⁴. The purpose of this provision is to provide information to inform technical review of such substances in the future, so that if necessary, the group standard can be amended to put in place controls relating to such substances. To date no notifications have been received from importers or manufacturers of cosmetics.

“Nanoparticle” is defined in the group standard as “a particle having three dimensions in the nanoscale and a diameter of less than 100 nanometres”. This is an interim definition that can be readily revised when international consensus on definitions emerges.

The Ministry of Research, Science and Technology (MoRST) has published a “Nanoscience & Nanotechnologies Roadmap” on directions for research and policy associated with the responsible development and management of nanoscience and nanotechnologies in New Zealand⁵.

5. Research programmes or strategies designed to address human health and/ or environmental safety aspects of nanomaterials

There are currently no research programmes underway to address human health and/or environmental safety aspects of nanomaterials.

However, two proposals have been received by the Foundation for Research Science and Technology (FRST) that investigate the plant uptake of quantum dots, and the flow on effects to downstream fauna; and a modelling system that can assess possible environmental exposure scenarios to alleviate the uncertainties associated with nanotechnologies. This may help researchers and regulators predict the environmental risk of nanomaterials when considering the regulatory approval of products containing nanomaterials. These proposals are currently under consideration.

MoRST hosted a successful Symposium on Nanoscience and Nanotechnologies in February. The Symposium enabled policy makers and others to find out more about nanotechnologies and their implications; encouraged collaborations between nanotech and social researchers; identified research questions for social and regulatory issues; and initiated discussion on other required policy work

6. Information on any public/ stakeholder consultation

³ The provision has not been applied to nanoparticles containing zinc oxide and titanium dioxide on the basis of a review by the Australian therapeutic Goods Administration (TGA) which concluded that there was no cause for health concern at this time.

⁴ <http://www.ermanz.govt.nz/appfiles/orgctrl/pdf/HSR002552Con.pdf>

⁵ <http://www.morst.govt.nz/current-work/roadmaps/>

No public/stakeholder consultation has been conducted on the safety of nanomaterials, however the MoRST Symposium on Nanoscience and Nanotechnologies in New Zealand provided a forum for useful discussions between policy makers and the nanotechnology industry.

A proposal has been received by FRST for a study into the societal impacts of nanotechnology. If successful, the study will involve a series of public consultation events. The proposal is currently under consideration.

Additional Information

MoRST has also established the Navigator Network⁶ to identify emerging science trends and innovations, particularly in biotechnology and nanotechnology.

The Bioethics Council will continue to investigate the cultural, ethical and spiritual implications of nanotechnology as part of their “future watch” function.

⁶ <http://www.navigatornetwork.net.nz/>