

Submission: NICNAS regarding the regulation of nanomaterials

NICNAS must act to close regulatory gaps ensure that both nano-forms of existing chemicals, and nano-forms of new chemicals, face mandatory safety testing before they can be used in products.

- There is a strong case for a moratorium on the commercial use of nanomaterials until the safety science catches up and risk assessment procedures can be validated. Leading international authorities including the European Food Safety Authority warn that we do not yet know enough about the behaviour of nanomaterials to design reliable risk assessment.

- NICNAS should commit to use of the precautionary principle in handling nanomaterials. At the 2008 International Forum on Chemical Safety's meeting in Dakar, 71 governments, 12 international organisations and 39 NGOs have recommended “applying the precautionary principle as one of the general principles of [nanotechnology] risk management”

- NICNAS should commit to prioritising public interest management of nanomaterials, including the community's ‘right to know’. Information on the types and quantities of nanomaterials used, and their use in particular products and industrial chemicals must be made freely available, including through product labelling.

- Nanomaterials should be defined as ‘particles having one or more external dimensions measuring approximately 0.3 nanometres (nm) to 300 nm, or particles which have internal structures that exist at this scale’. This is necessary because many particles that measure up to 300nm in size present new, nano-specific health and environmental risks

- The definition proposed by NICNAS of <100nm is too narrow and will leave out many nanoparticles that pose new safety hazards. Nanotoxicologist Professor Ken Donaldson has told the UK House of Lords Inquiry into nanotechnologies and food that “there is no toxicological basis whatsoever” to limit the definition of nanoparticles to <100nm.

- Nanoparticles should not be defined as insoluble. Nano-solubility is complex and poorly understood. Further, there is much evidence that partially and even wholly water soluble nanoparticles can be toxic

- Nanoparticles should not be defined as biopersistent. Biopersistence is poorly researched and poorly understood. Importantly, even particles that do not show significant biopersistence may be toxic in the short term

- Aggregates and agglomerates (clumps of nanoparticles) whose primary particles are nanoscale should also be recognised and assessed as nanoparticles.

- Voluntary initiatives on nanotechnology have failed in Australia, the United States and the United Kingdom. NICNAS should pursue mandatory regulation of nanomaterials

· Transparency in regulation of nanomaterials is essential. Risk assessment reports should be published in full.

· A formal review of the NICNAS regulatory framework should be required 2 years after it begins