

# Nanorigo.

Risk Governance, insurance and the issue of Contestation.

# Risk Perception Among Insurers on NMs




- Decline in attention towards NMs
- Less Evidence of use of formal tools
- More holistic Approaches
- *Contra* - Regulatory Demands
- The logics of insurance
- Different type of Exposure (legal)

Nanoparticles are tiny. They're going to be very easy to inhale. This applies nearly equally to those involved in their manufacture and to those exposed to them in their day-to-day use. Of course, there's some testing of nanomaterials prior to their release into the commercial market but who's to say how long testing should last or what it should consist of? Unfortunately, there's no single body regulating nanotechnology nor is there a universal agreement on what constitutes "inhalation risk".

Insurers are going to need to exercise extreme caution here; imagine the consequences to the bottom line if a nanotech product were to become, as has been theorized; "the next asbestos". Nanotechnology in the food chain in fact grows this risk exponentially; asbestos wasn't anywhere near as prevalent as food is.

It's possible that nanotech may have major environmental impacts. Toxicology and environmental reactions are poorly understood for the new technology.


There are also potentially unforeseen effects to take into account; nanotechnology is new – we may not even have conceived of some of the problems it may create in the future.

 JAFAR  
**What is Estimated Maximum Loss? Definition & Examples.**

very useful

 FARID KARAJAH  
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Another factor to this as well is that its predicted that the number of criminal cases involving the internet of...

 NORE  
**An Insurer's Guide to the "Internet of Things"**

**Contributors**



**simon cowling**  
0 POSTS



**Angelique Ruzicka**  
22 POSTS

# 'I wash all my food like crazy': scientists voice concern about nanoparticles

US foods are increasingly full of nano-scale additives, even as researchers raise alarm bells about their safety

Mičo Tatalović

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▲ Titanium dioxide, widely used to give foods a white glow, is one of a slew of new food additives that may cause

Black/Alamy

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Due to safety concerns, some scientists who have studied nanoparticles say they would have reservations about eating food that contains the technology. “As a consumer, I wash all my foods like crazy,” says Christine Ogilvie Hendren, executive director of the Center for the Environmental Implications of NanoTechnology at Duke

The industry that makes the material maintains it is safe. “In more than 50 years of use as a colourant, no verifiable link has ever been shown between general intake of titanium dioxide and ill health in humans,” a spokesperson for the Titanium Dioxide Manufacturers Association says. “We regret the precautionary decision taken by the French government to suspend the use of E171/titanium dioxide in food in France.”

A 2013 study by Cho Wan-Seob from Dong-A University in South Korea, and colleagues, found no significant accumulation in rats when ingested, and instead suggested that most of it was eliminated through faeces.

# Two Question for you

- Can you think of any areas of contestation in Nanomaterial research?  
(score 0-1)
- As relative outsiders we were told at outset different branches of the research community tended to have different views – is there any truth in this?



# Some more Contestation

- A 2020 study by Guangping Xie from Tongji University School of Medicine, China, explained that the TiO<sub>2</sub>-NPs could not penetrate through the damaged skin. It implied that the TiO<sub>2</sub>-NPs should be safe when it was applied and contacted with skin. (Their results indicated that 20 nm TiO<sub>2</sub>-NPs could not penetrate skin in vivo even if the stratum corneum layer of skin was damaged)



# Whereas.....

- a study by Daniela Pelclova in 2019 showed TiO<sub>2</sub>-NPs could penetrate skin (43 nm, oil-free formulation, crystalline structure. Detectable levels of TiO<sub>2</sub>-NPs were found in the blood and urine of the human volunteers up to one week after using the sunscreen formulation. The penetration of nanoparticles beyond the stratum corneum suggests that oxidative stress (ROS) may lead to more serious adverse cellular effects, and possibly cancer.)



# Implications of contestation



## NMP13

- But for attempt to establish a nanorisk governance structure