

**IN-COSMETICS IN-FOCUS**

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**Nanoparticles have been responsible** for some of the most exciting innovations in sun protection of the last five years. However, they have also been subjected to a great deal of scrutiny from consumer associations and regulatory bodies. On 1 December 2011, the French Ministry for Ecology and Sustainable Development released a regulation project relating to the annual declaration of nanosize substances. Globally, we are expecting nanoparticles to be part of the next REACH releases in Europe and to be covered very soon by the US EPA.

Marketing teams love to keep everything simple; a unique selling proposition; one molecule, one benefit. Declare it a scientific revolution and there you have it, job done! On the other hand, consumer associations are no better at playing with details. One substance, one evil; declare it a public health issue and they will go to the media. The reality is often more complex.

Nano substances are not new in our industry. In 2006, Yoelle Guiserix wrote an article for *Beyond Beauty* magazine entitled *The Cosmetic Industry is entering the Age of Nanotechnology*. Hydroxyapatite in Platinéum by Lancôme, colloidal gold in Gold Future by Helena Rubinstein and particles under 10nm in Shiseido's Elixir Skin Up were highlighted as successful examples of the new revolution at work. But fast-forward five years and Kobo is launching a non-nano TiO<sub>2</sub> and non-nano claims are popping up in consumer brands. Have nano sunscreens suddenly lost their virtues?

Non-organic sunscreens have been a huge success in recent years because they enable the formulation of elegant and pleasant textures – a key feature when it comes to sun protection products. To offer full protection, sunscreens need to be applied in a very homogeneous way, at the right dosage and repeatedly. If the product is sticky, heavy and unaesthetic, consumers usually fail to comply. But nano filters are not just about textures. At the Sun Protection conference last June in London, Bernd Herzog from BASF gave a presentation on the *Influence of Particles on the Performance of Sunscreens*. He revealed that both inorganic and organic particulate UV filters tend to act via absorption and that

# Communicating sun care in a complex nano age

The next in-focus (in-cosmetics, 17-19 April 2012, Barcelona) is dedicated to Solar Beauty and will enter the regulatory debate on the subject of nanoparticles. Let's not let misconceptions spread across markets, says **Jacques Sebag**, director, Re-source!

the efficiency of particulate UV filters increases with decreasing particle size. Which is by no means just a cosmetic improvement.

According to the Skin Cancer Foundation, skin cancer is the most common form of cancer in the US. Of course sun exposure may also generate positives. It is necessary for the synthesis of vitamin D and it also makes you look and feel better.

Nanotechnologies may bring phenomenal improvements in human health and well-being, however nanoparticles, because of their size, show different chemical and physical behaviours. Now governments and industries are securing the approaches so that we may both develop a new science and have a better understanding of its impacts on the environment and human health. This is exactly what REACH is about – providing a regulatory framework for the introduction of new substances into the market. Yes, this will make things more complicated, but sustainable development is synonymous with complexity – analysing the complete life cycle of a product is anything but simple. So what we really need are new tools to manage complexity whilst also enjoying the benefits of emerging technologies.

This is exactly EcoMundo's mission. Pierre Garçon started the company in 2007, the same year REACH went live. After participating in two European projects – Eco Design Interactive Tool in 2001 and Eco Design Interactive System in 2004 – on industrial eco-design and the traceability of dangerous substances, he realised that innovating industries would need new management, communication and decision tools in order to deal with fast evolving regulation and information needs. If REACH registration is EcoMundo's core business today, then the company also assists its customers in integrating the requirements of responsible development in their day-to-day operations. Among other

things, it has designed six different web tools ranging from full management of SDS to the preparation of labels, from the compliance check of suppliers to the communication processes with suppliers and customers, regarding SVHC.

However, with EcoMundo Pierre Garçon goes way beyond consulting services. He believes in preserving the environment and the health of his children. He also believes in the benefits of technologies and preserving a sustainable economic environment – and not necessarily letting new sciences go to other parts of the world for fear of possible negative reactions. Products have positives and negatives – the idea is to constantly develop the knowledge on past and new products and share the information.

Which is why EcoMundo is engaged with research and information organisations such as the NanoCoalition, a Society of Chemical Manufacturers and Affiliates (SOCMA) initiative in the US, and the newly formed Rolvatain research centre. The latter is set to be the largest eco-tox research centre in the world and its mission is to study the possible implications of different substances on the environment and on human health while taking into account their inherent complexity.

There is no straight answer to the status of a substance. Even free radicals may have a positive role in some circumstances. Should we stop accepting overly simplistic views on substances and technologies and be afraid of the future? Or should the industry accept the dialogue with both consumer associations and NGOs and be more transparent about their technologies, for a more mature debate to take place and raise the scientific level of the discussions? Nanotechnologies are just the beginning and highly promising. Let's not kill the science in the egg. **cb**

EcoMundo will be exhibiting on in-focus' solar beauty special features area with a programme dedicated to nanoparticles. [www.in-cosmetics.com](http://www.in-cosmetics.com)