A news sheet

News for Friends of Anthroposophy and Members of the anthroposophical mixed society.*

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Nanoparticles in WALA preparations

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"Once a pioneer, always a pioneer." - please get serious about it again!

Dear Dr. Fritsche

Last month I emailed the following message to your customer service department.

Good day

Just now I bought a Dr. Hauschka Tinted Sunscreen Face by mail order, because on the advice of my doctor I need to protect the face, especially the nose area from sunlight. A tinted cream seemed to me to be just the right thing. Now I am very surprised, actually stunned, to read on the package that this cream contains nanoparticles!? Dr. Hausch ka was until now the brand that produced really consistent, high-quality natural cosmetics and body care products. How can you offer a product as "100% certified natural cosmetics" which contains nanoparticles ---?!!! And this for a product that is absorbed through the skin. Surely your product developers know that nanoparticles have nothing to do with naturalness and penetrate directly into all tissues, i.e. are not metabolized, are deposited everywhere. Do you want to ruin your reputation? How do you bring nanoparticles and natural cosmetics together? You

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can't. Just by the way I say that with the almost 35.- francs, which this cream, which I do not want to use, costs, I have also suffered damage.

With questionable greetings
Dr. Urs Georg Allemann

Some time later, I received two-page explanations, according to which, among other things, it is emphasized that the two substances in nano size are expressly permitted according to the European Cosmetics Regulation (printed in bold) and are themselves in conformity with the standards of NATRUE Natural Cosmetics (printed in bold). In addition, Dr. Hauschka sun care is designed according to the latest scientific findings.

Now, it is obvious that your product developers - in this and also other cases - are guided by the usual standards of natural science and not by what the founders of their company were oriented towards: a processing of substances from nature, which is oriented towards living processes and therefore appropriate for both the human organism and the nature from which they are taken. Neither is the case with nanotechnology. The substances are brutally smashed into such small pieces that they do not occur naturally anywhere, get into the environment after use, get deposited and cause negative effects. If you as a company want to stay true to your heritage, you must remain a pioneer and develop products that are effective in ways other than the conventional, destructive ones, even if in individual cases they may not satisfy the same, often exaggerated desires of consumers. At present, your advertising text (see above) is a lie... .

Furthermore, it should not be overlooked that it has not been conclusively clarified that zinc and titanium oxide in nano size is harmless to the skin. Apart from that, the production and processing of nanoparticles should be generally rejected and urgently banned. Instead of taking the right direction and offering alternatives, the house of Wala is walking in lockstep with a technology that is hostile to life - for how much longer? Please change your course and reflect on the foundations on which your house was founded.

With kind regards
Urs Georg Allemann

Attachment

Cosmetic products with nanoparticles are relatively new on the market and have the great advantage of being elegant on the skin and avoiding the use of harmful chemicals.

However, research is not yet unanimous in this area. There are many indications that liquid nanoproducts are safe as long as they are applied to intact, undamaged skin. However, critical voices are also emerging from the research community, and low penetration through the skin has been demonstrated. So there remains a residual risk, which is why we do not recommend UV filters with nanoparticles.

For delicate baby skin, nanoparticles should be avoided in any case. We also recommend avoiding powder and spray products that use nanoparticles. Nanoparticles must not be inhaled under any circumstances.

https://www.beyer-soehne.de/nanopartikel-in-der-sonnencreme/#

The most important in a nutshell

Question: Do zinc oxide nanoparticles from sunscreens penetrate into deeper epidermal layers?

Answer: Even after multiple hourly or daily applications, no elevated zinc oxide levels beyond the stratum corneum can be detected.

Relevance: Zinc oxide nanoparticles from sunscreens are unlikely to cause skin damage.

Limitation: few subjects, short-term use.

https://www.aerztezeitung.de/Medizin/Zinkoxid-Nanopartikel-in-Sonnencreme-offenbar-sicher-254292.html

Conclusion: Scientists are not in agreement about the danger of zinc oxide. A small residual risk probably always exists. In any case, use on irritated or "weak" skin is not recommended.

https://praxistipps.focus.de/zinkoxid-so-schaedlich-ist-der-inhaltsstoff-fuer-sonnencreme_119074

Professor B. Baroli from the chemical-pharmaceutical-technological department of the University of Cagliari/Sardinia doubted the validity of the previous test results concerning nanoparticles - and carried out his own investigations. Earlier tests took place under laboratory conditions and thus presupposed absolutely intact skin - which, of course, is not always the case in reality.

The scientist has now carried out tests under real conditions, the results of which differ significantly from those of the laboratory tests. Thus, nanoparticles penetrated the lipid barrier and penetrated into deep skin layers. The

stratum corneum (horny layer of the epidermis) was regularly penetrated, and in an application of nanoparticle-infused cleansing products for hair care, the particles penetrated as far as the hair roots (1) (2).

According to the results of the tests conducted by Prof. Baroli, different influencing factors determine the probability of penetration into the skin. In addition to the degree of existing external injury to the skin examined, the size of the nanoparticles is particularly decisive for this, as smaller particles penetrate particularly easily. Particles smaller than ten nanometers are the most critical.

In addition to the quantity, the emulsion used is also of importance for the possible danger posed by nanoparticles, especially as this can lead to the particles being able to penetrate the protective layer of the skin more easily. So far, too little is known about the interaction of emulsions and nanoparticles to speak of safety here.

As a conclusion from her investigations, Prof. Baroli gives the advice not to buy products with small nanoparticles as long as there is no evidence that they are harmless. This is particularly true for sunscreens, because the skin can be pre-damaged by sun exposure and is then particularly permeable to minute particles.

1) Baroli B. "Skin absorption and potential toxicity of nanoparticulate nanomaterials." J Biomed Nanotechnol. 2010 Oct;6(5):485-96. (Skin absorption and potential toxicity of nanoparticulate nanomaterials.)

(2) Baroli B et al, "Penetration of metallic nanoparticles in human full-thickness skin." J Invest Dermatol. 2007 Jul;127(7):1701-12. epub 2007 Mar 22. (The penetration of metallic nanoparticles into human full-thickness skin.)

https://www.zentrum-der-gesundheit.de/bibliothek/umwelt/schaedliche-faktoren/sonnenmilch-nanoteilchen

Do ZnO nanoparticles penetrate the skin?

It is particularly important to determine whether ZnO nanoparticles are more likely to penetrate the skin than ZnO microparticles. Now available are the results of a number of different studies with animals and human subjects that monitor possible absorption of either the particles themselves or zinc ions through the skin. Taken together, the results show that small amounts of zinc, in soluble form, can enter the skin. However, the amounts are much smaller than the normal amounts of zinc in the body.

https://ec.europa.eu/health/scientific_committees/opinions_layman/zinc-oxide/de/index.htm#6

Not visible and still dangerous

Nanoparticles or nanodust can enter the lungs primarily through respiration. There they accumulate in the tissue and cells. If they also contain active substances, such as metals or metal oxides like silver, zinc and copper, these can be released via special transport systems and also damage the lungs. The smaller the particles are, the more violently they react and pass from the lungs into other organs.

Current assessment: The use of nanotechnologies in medicine can have desirable but also harmful effects. According to the German Federal Office for Risk Assessment (BfR), the general data situation is still uncertain, but not for titanium dioxide. As of September 9, 2021, titanium dioxide has been officially classified as a "category 2 carcinogen for inhalation."

https://www.tk.de/techniker/gesundheit-und-medizin/behandlungen-und-medizin/copd/tk-plus-bei-copd/dmp-news/nanotechnologie-titandioxid-gefaehrlicher-als-gedacht-2122710?tkcm=ab

It is suspected that the nanoparticles are so small that they penetrate the body. There they could endanger the organism. Whether and how nanoparticles penetrate the skin is not completely clear according to current studies. If you want to be on the safe side, you should avoid nanoparticles.

https://www.kinderarzt-gilching.de/uv-filter-in-sonnencremes-welche-sind-wirklich-unbedenklich/

Titanium oxide lays on the skin like a mirror

At this size, the originally white particles of titanium and zinc oxide are invisible, explains Cologne dermatologist Uta Schlossberger. "They lay down on the skin as a clear film, forming a kind of mirror that reflects the sunlight."

In the past, sunscreens with titanium or zinc oxide left a white film on the skin for quite some time. This unattractive effect is eliminated by reducing the size of the sunscreen to nanoscale. [...]

That sounds positive, but nanotechnology in cosmetics is not without controversy. So far, little is known about its effects on humans and the environment. "In fact, we still know too little about possible long-term damage," says Rolf Buschmann of the Bund für Umwelt und Naturschutz Deutschland (BUND - German League for the Environment and Nature Conservation).

There are not yet many conclusive studies. Buschmann refers to a study conducted by the University of Koblenz with water fleas. According to the study, the nanoparticles damaged the small aquatic organisms in a different way than previously suspected: "While the organisms directly affected by nanoparticles did not show any damage, the next generation showed a different picture. The offspring showed impaired swimming ability," says Buschmann.

For their study, the researchers in Koblenz had kept water fleas in water containing 0.02 to 2 milligrams of titanium dioxide nanoparticles per liter. These concentrations are

more than 50 times lower than what is harmful for these animals according to previous studies.

The observation is particularly noteworthy because no direct effects were detected in the parents exposed to the nanoparticles.

https://www.welt.de/gesundheit/article153563451/Sind-Kosmetikartikel-mit-Nanoteilchen-gefaehrlich.html

Deposits of nanoparticles reach the fields through wastewater as sewage sludge. The nanoparticles also do not withstand the water, whereby nano-titanium dioxide in particular accumulates in the water and in the coastal area. Thus, this substance can have a harmful effect on the ecosystem of water bodies. https://www.smarticular.net/sonnencreme-schaedlich-oder-gesund-umweltschutz/

A large proportion of the chemicals used by humans end up in the environment **sooner or later** - during production, use and disposal. Long-lived substances are dispersed in soil, water or the air, they are taken up by animals and plants and passed on through the food chain - and can ultimately end up on consumers' plates.

Today, chemicals can be detected even in the remotest corners of the world - even where they have never been used. They reach all parts of the earth via rivers and oceans, evaporation, air currents and the food chain.

Nanomaterials could also be dispersed in this way. With their increasing use in a wide variety of products, it is to be expected that more and more nanoparticles will enter the environment. At present, it is not known what quantities are already present in nature. For the most part, it is even completely unclear which substances can escape from which products, as there are no suitable measurement methods.

Little is also known to date about the environmental hazards posed by nanotechnologies, as test methods developed for larger-scale chemical substances can only be used to assess nanomaterials to a limited extent.

However, initial studies show that nanomaterials can be very harmful to various creatures. Titanium dioxide and zinc oxide in nano form, for example, have been shown in tests to be toxic to ecologically very valuable water fleas. Antibacterial nanomaterials, such as the increasingly common nano-silver, have been found to be harmful to beneficial bacteria that perform important functions in water and thus play a crucial role in the freshwater ecosystem. However, what the increasing input of nanoparticles into the environment really means for the biodiversity of animals and plants is not yet foreseeable.

https://www.bund.net/themen/chemie/nanotechnologie/umwelt/

Ingredients Dr. Hauschka Tinted Sun Cream Face SPF 30

Water, neutral oil, **zinc oxide (nano),** alcohol, **titanium dioxide (nano),** vegetable glycerin, extracts of kidney vetch and prickly pear, coconut fatty acid ester, polyglycerol fatty acid ester, apricot kernel oil, vegetable triglycerides, aluminum stearate, candelilla wax, polyhydroxystearic acid, extracts of calendula and horse chestnut bark, macadamia nut oil, sesame oil, jojoba oil, wheat germ oil, olive oil, coconut oil, sugar fatty acid ester, apricot pulp, extract of rosehip, essential oils, magnesium sulfate, sugar fatty acid ester, sunflower oil, propolis, silicic acid, zinc stearate, aluminum oxide, bentonite, iron oxides.
*From natural essential oils

Call to the readership

In the sense of an associative cooperation between consumers, retailers and producers, that is produced for which there is a real need, a real demand. Responsible consumers, of whom there are many among the customers of Dr. Hauschka Skin Care, cannot endorse the use of nanotechnology in any area. (There is an urgent need to work towards banning it).

Write a letter to the company Wala (not an e-mail, but on paper!), and ask them to replace the nano-particles in their cosmetic products with conventional ones, to go back to their original philosophy.

For the editorial office
Roland Tüscher

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