

SUN Products

DATABOOK 2024

INTRODUCTION	p. 2
SUN: BENEFITS, DANGERS AND PROTECTION	p. 3
Skin and sun: risky relationships	p. 4
Sun exposure: the right balance	p. 9
UV damage skin several hours after exposure	p. 12
Sun exposure: too many misconceptions, not enough caution!	p. 13
French people and sun protection	p. 15
Sun and tanning: what are the questions most asked by Internet users?	p. 17
Sun protection: advice still badly followed	p. 19
Sun protection: Gen Z needs to review its approach	p. 21
Which sun cream should you recommend?	p. 22
ANSM gives some advice about how to choose your sunscreen	p. 27
On the proper use of sunscreen products by the French ANSM	p. 28
Skin and sun: Ten Questions/Answers for the right protection	p. 30
Sun, my sunscreen and me	p. 35
Sun products: exposure data question safety for babies	p. 37
Moisturiser with SPF less effective than a sunscreen to protect skin	p. 41
Should we put on sunscreen indoors?	p. 43
UV filters: a daily concern?	p. 44
When used properly, sun creams do not block the synthesis of vitamin D	p. 45
DIY sunscreens: attention, danger!	p. 46
LES FILTRES ET ÉCRANS EN DÉBAT(S)	p. 47
Efficiency and safety	p. 48
Sunscreens: the wrong trial	p. 48
A recent study to confirm the effectiveness and safety of organic sunscreens	p. 50
How UV filters in sunscreen products penetrate the body	p. 52
A study on the dermal penetration of titanium dioxide	p. 53
Changes in efficacy and toxicity of sunscreens due to zinc oxide	p. 57
Accumulation of Benzophenone by degradation of Octocrylene in cosmetic products	p. 58
FEBEA reasserts that sunscreens are safe	p. 60
MBBT: an exceptional, but contradictory UV-filter	p. 61
Titanium dioxide	p. 63
Sunscreens and nano-titanium dioxide: health risks?	p. 66
EWG urges USFDA to ban Oxybenzone in sunscreen products	p. 68
French Anses calls for a ban on Octocrylene in sunscreens	p. 69
Environmental toxicity	p. 70
Sunscreens: a scientific paper in favour of nanos	p. 70
Nano or not: TiO ₂ is toxic for the environment	p. 73
Nano UV-filters: a hazard to sea life	p. 73
Classification of UV filters: European inconsistencies	p. 74
How sunscreens release metals and inorganic nutrients into seawater	p. 75
These UV filters that do not harm corals	p. 76
Toxicity of UV filters on corals: the French Anses recommendations	p. 77

REGULATION	p. 80
Datasheet: UV-filters and sunscreens	p. 81
In Europe	p. 95
Sunscreens: the European Commission Recommendation	p. 95
Karanja oil: an ANSM Opinion issued to manufacturers	p. 98
Regulation 2022/1176: new restrictions for Benzophenone-3 and Octocrylene	p. 98
Regulation 2022/135: restrictions for Methyl-n-Methylantranilate	p. 101
4-Methylbenzylidene Camphor : the SCCS final Opinion	p. 103
Request to the SCCS to re-evaluate the safety of Titanium Dioxide	p. 105
Regulation (EU) 2022/2195: new regulation for 4 cosmetic ingredients (EDs, colorant, UV filters)	p. 106
Regulation 2024/996: restrictions on vitamin A, Arbutin and 6 endocrine disruptors	p. 112
Revision of the European Commission's " Sunscreen Products " Recommendation	p. 121
On the ISO side	p. 125
Water resistance of sun protection products: the latest two ISO standards	p. 125
In vivo determination of SPF: new ISO standard	p. 126
Towards a valid method for measuring SPF in vitro	p. 126
Cosmetics Europe publishes Recommendation No.26 on the use of alternative methods to ISO 24444:2019	p. 127
Measuring the SPF in vitro: the prospects of the future ISO 23675 standard	p. 128
On the international scene	p. 131
Sunscreen products around the world (1/2)	p. 131
Sunscreen products around the world (2/2)	p. 134
Brazil updates its list of authorised UV-filters	p. 136
Brazil notifies its regulation on sunscreen products and multifunctional cosmetics with SPF	p. 144
UV filter assessment in the USA and Europe	p. 146
New FDA's guidelines for sunscreens products	p. 150
Sunscreens: New FDA Requirements	p. 150
Sunscreen Monograph: the FDA proposal	p. 152
New Zealand: major update of cosmetics regulations... and a ban on PFAS	p. 153
Taiwan updates its lists of restricted ingredients and UV filters	p. 155
"UV Filters" Ingredients Sheets	p. 157
FORMULATION OF SUNSCREEN PRODUCTS	p. 158
The right sunscreen formula	p. 159
Functional ingredients as SPF boosters	p. 164
No, anti-inflammatory ingredients do not have any impact on the SPF!	p. 168
Sunscreen products: what if they protected without doing any harm?	p. 170
When micro-organisms inspire sun protection research	p. 173
Sun protection: should we go for an SPF100+?	p. 177
Scientists find unprecedented protection against UVA	p. 179
More eco-friendly sunscreens with BASF's EcoSun Pass	p. 180
L'Oréal introduces "its biggest suncare innovation in 30 years"	p. 184

Introduction

Indispensable for protecting the skin from the harmful effects of UV rays, on the beach in summer or in the mountains in winter, sun protection products are nonetheless the subject of recurrent criticism as to their effectiveness or doubts as to their safety.

And regularly, debates resurface on the allergenicity or toxicity (for health or for the environment) of synthetic filters or nanoscreens, on the reality of SPF... while the formulation of this type of product always remains a challenge and their regulation, in Europe as well as internationally, is not the simplest...

Which options should be chosen? Which products, which set of filters, which formula, which galenic, which labelling? CosmeticOBS has compiled all its articles in this Databook to provide an overview of the delicate issue of sun protection products.

Sun: benefits, dangers and protection

First of all, it is not advisable to expose yourself to the sun without appropriate protection. This is not a luxury, it is a public health imperative, to protect the skin from sunburns and burns as well as from the development of melanoma, those very serious skin cancers. A sun protection product is essential. And this applies even more to children, who should never be exposed to the sun before the age of three. And it's not a luxury to remind people of this either, as the surveys follow one another to show just how poorly this advice is still followed... This is because consumers still have many questions, and almost as many misconceptions, about sunscreen products. Choosing the right sun protection is not that simple. And once the choice is made, you still need to know how to use it optimally to guarantee the maximum safety it can offer.

Explanations, clarifications and reminders of the basics...



SKIN AND SUN: RISKY RELATIONSHIPS

Our skin has a relationship with the sun (and its UV rays) that is sometimes happy, sometimes dangerous, always complex and never harmless. Jean-François Doré, a researcher at Inserm, gave an overview of scientific knowledge on this subject at the 5th meeting of the French Antioxidant Society, which was held on 15 November in Paris. A presentation in a land of contrasts...

An emeritus Director of Research in Inserm, in the Lyon Cancer Research Center, Jean-François Doré has, for a long time, studied the effects of sun on our skins, from the answer of the human melanocytes to UV radiation to how using sunscreens may impact our ways of exposure to sun.

Just for once, he said, he began his conference by detailing the benefits we get from sun... which did not prevent him to point out all of its less positive effects.

When the sun is friendly

A fact is unquestionable: the sun is essential for life on the Earth. Being exposed to sunrays is highly beneficial to the human health.

Good for our morale

Sun has a direct effect on our mood. Not only, because we think, a sunny weather is more agreeable than a rainy greyness, but also because an exposure to UV radiation modifies our physiology, by releasing endorphins.

Endorphins have been discovered in the seventies. Their name comes from “endogenous”, meaning something that is in our body, and “morphine”. These “natural morphines” are, indeed, neurotransmitters released by our brain in psychological or physical stresses situations (efforts, or high-intensity emotions). They link to the brain opiate receptors, and provide an analgesic and euphoriant effect. Less pain, more happiness: endorphins are also called the well-being hormones.

Among the situations that produce most of the endorphins: run a marathon, have sex, exposure to sun ... Or, more rightly, to its UV radiation. In fact, if beaches may be seen as, after Jean-François Doré’s words, “legal immense shoot galleries”, tanning booths have exactly the same effect.

Good for vitamin D

The “vitamin D” is, in fact, a steroid hormone whose the main function is to balance the phosphocalcic metabolism: it is a factor in the absorption of calcium and phosphorus by intestines, as well as in their reuptake by kidneys.

Vitamin D deficiency leads to rickets in children, and to osteomalacia (defective bone mineralization) in adults.

However, vitamin D has also a role in the functioning of something as 200 genes, hence, its importance in some diseases (diabetes, cancers ...)

Skin exposure to sun synthesizes 80 to 90% of the vitamin D we need. UVB radiation induces the manufacturing of the provitamin D3, which is, then, isomerised in vitamin D3 and transported in the overall body for many uses.

Good to fight melanomes?