

During these 3 last years, we were pleased to collect your cosmetic expert opinion about Sun care product and we would like to thank you for your kind participation.

With the help of Attraction company, this Special Issues of HelioNews Focus on Suncare Survey summarizes these 3 sun care surveys all over the world with more than 450 participants about 3 different topics:

- 2012. The perception of the products of solar protection (in-cosmetics 2012, Barcelona)
- 2013. What are the future sun protection products expected by social media users? (Sun Protection Conference 2013, London).
- 2014. The sun protection determination.

Please enjoy reading these results and we remain at your disposal for any further request.

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2012 The perception of the products of solar protection

The study was led between December 2011 and June 2012 beside French Internet communities sensitive to the suncare protection and to the nanoparticles, experts of the cosmetic sector and visitors of in-cosmetics in Barcelona.

6 relevant themes were extracted from the Web survey (forums, blogs and sites of French Internet) then transposed into questions to the in-cosmetics experts (255 participants of 39 different nationalities).

Nanoparticles

The French Internet users do not consider globally the presence of nanoparticles as criteria during their purchase. 63 % of experts consider however that the consumers attach importance to nanoparticles while it is only the case for a low minority of them.

UV filters

The Internet users seem rather sensitive to the nature of the UV filters, mineral or organic filters, contained in the sun protection products. Experts and Web agree on the relative importance of the choice of the mineral or organic filter during the purchase of sun protection products. In sight of these elements, we are tried to wonder if the Internet user has today established the link between mineral filter and nanoparticles?

Sun risks

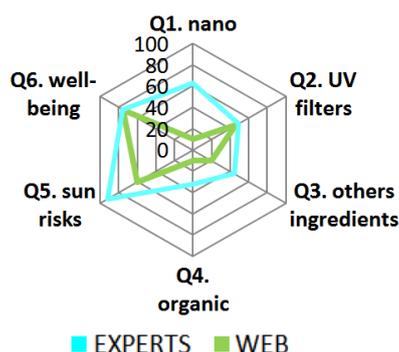
Considering the link between the use of sun protection products and the prevention of sun risks, a big part of the French Internet users approves this legitimacy. The in-cosmetics experts as for them approve by a large majority [92 %] the importance of this relation of product and protection and are unanimous on the stakes in the sun risks protection.

Well-being

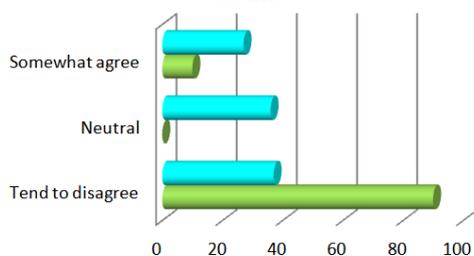
The Internet users consider that the application of sun protection products contributes to their well-being. The experts share in 76 % this opinion. Every community manufacturers and consumers agrees on the importance of the experience of the use of a sun protection product. Would it be the development and the search of texture always more pleasant that makes this shared opinion?

Synthesis of the opinions difference of Web and cosmetic experts

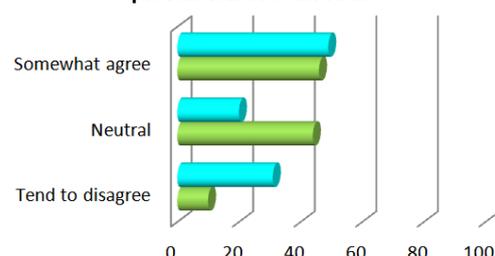
Comparison of the Web / expert opinions for each questions.



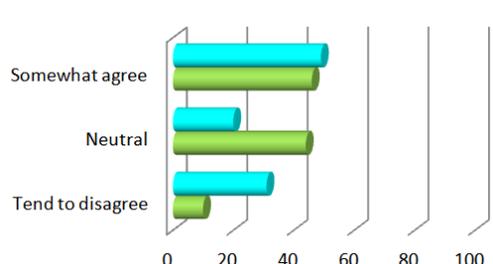
Is the French consumer sensitive to the presence of nanoparticles in solar protection creams?



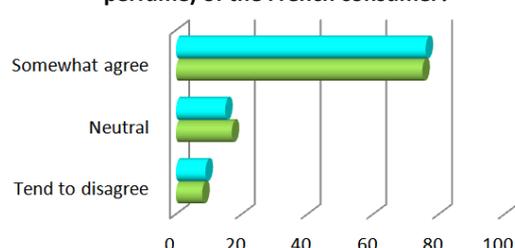
Is the use of the solar protection cream associated by the French consumer with the prevention of solar risks?



Is the nature of the UV filters a purchasing criteria for the French consumer?



Does the use of the solar protection creams contribute to the well-being (suntan, texture, perfume) of the French consumer?



2013 What are the future sun protection products expected by social media users?

Does the opinion of consumers match that of cosmetic experts?

From these two points of view, can we strive to find a middle ground to design the future generation of sun protection products?

We present the latest results from our survey of social media, where we evaluate the characteristics of sun protection products that are expected by users.

The study was led between January and May 2013. It concerns International Internet communities sensitive to the sun protection products and sun protection and the French and foreigner experts of the cosmetic sector 118 persons, who have answered the questionnaire via Internet from the 26th April to the 6th May 2013.

Results of the Web2.0 survey

We review the web2.0 sphere and the information given by non cosmetic experts. We explore the web information by linking key words related to sun protection. It represents more than 100 different web sites, forums and blogs consultation.

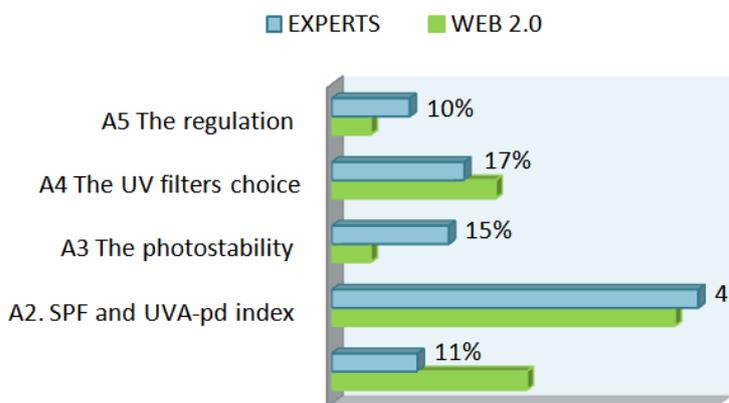
This information collected first concerns the **sun risks and the good practices for Sun protection products**. It explains the general sun risks and provides advice regarding sun protection. It is easy available on most of French, Swiss, American, Canadian and UK Web sites. In a secondary stage, Web2.0 information provides additional understanding regarding sun risks and SPP application and side effects. Finally, we compile all other relevant information disclosed in the Web2.0 in this third part. The Web sites consulted are

more "sun" specific. They are at border line with experts Web sites with dermatological and scientific approaches. Some extreme sun protection users [surfers, alpinists] Web sites share a very in-depth presentation of the subject.

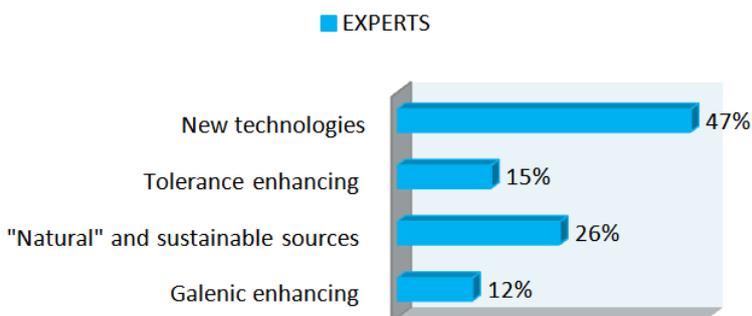
In conclusion, the **"customized solution"** trends are in accordance with the complexity of sun protection efficiency. In recent years, new digital services such as smartphone applications, blogs and websites have matched consumers needs and cosmetic offers, taking into account the complexity and the real life of sun exposure. It is reasonable to assume that these new digital territories combine with SPP use could answer the two essential needs of prevention and protection.

Results of the expert answers compared with Web2.0

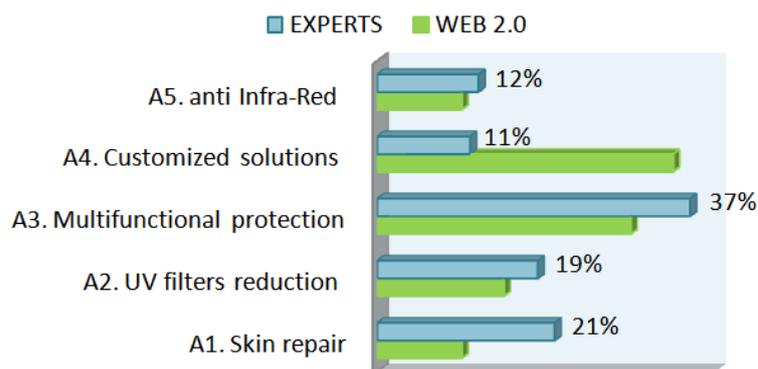
1/ The most important criteria of sun protection



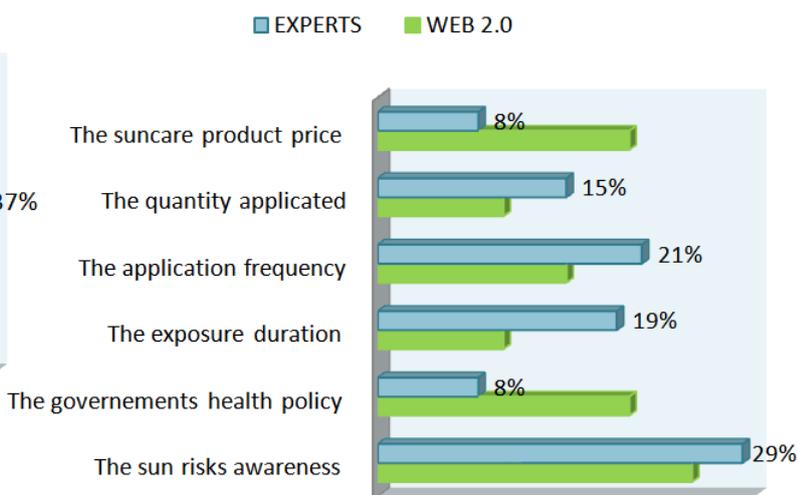
3/ The sunscreen ingredient innovation



2/ The next sunscreen generation



4/ Key factor of sun protection efficiency



2014 The sun protection determination

We first remind that a total of 44 persons having answered to this questionnaire via social network via internet during summer 2014. Second, the aim of these topics have been to evaluate what is the point of view about the sun protection determination (5 first questions) and what is the trend in term of use of sun protection test (5 last questions).

RESULTS

1/Regulation in future?

The most important point that people expects is a worldwide regulation harmonization. Obviously, this step is a long and fastidious way but by means of the recent ISO standards, a global harmonization is in course as it has been presented^[1]. After that, people trust that the regulation improves the reliability of values and claiming through In Vitro methods.

2/Action in term of sun risk prevention?

The majority of persons has the same opinion about this question and they would like more General public information. But beyond this part, instead of advertising with standard warning about the risk of skin cancer due to the sun, an interesting conference^[2] proposed a new strategy to get more people to use sun protection products through the «First principles of Evolutionary Psychology may prove useful in influencing behaviour change - through **positive** messages promoting youth, health and attractiveness.»

3/Key point for sunscreen development?

The two key points with higher results well describe the principle of sun protection efficiency^[3]: the UV protection performance and the distribution onto the skin. Indeed, the first will depend on the UV filters selection-combination and homogeneous distribution into the formula. The second will depend on the thickness and homogenous repartition after product's spreading which must allow the fewest thin layers as possible as well as any area without product.

4/Reliability of the In Vitro test?

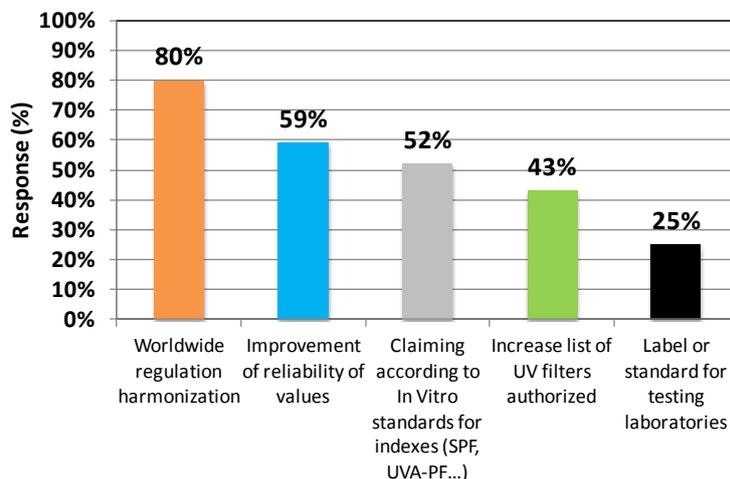
By means of these results, we can state that the 3 most important criteria for reliability are done by the ISO sun standard, the Substrate standardisation and the Internals quality processes. Beyond this fact, recently, the compulsory need to use an automated spreading in order to ensure reliability has been highlighted^[4] and awarness from experts about this subject could change in the future.

5/Criteria about sun protection test?

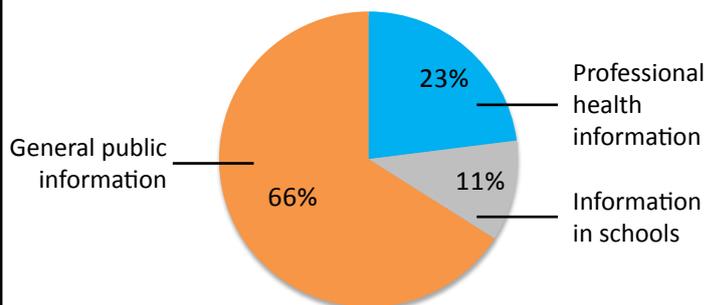
In the first place, as an evidence, the reliability of results appears as the most important criteria for the Sun Protection test. With also the other criteria (e.g. Ethic, Cost and Time), this question lead to the reflexion that the In Vitro test has these four advantages in comparison with In Vivo test^[5].

[1] J. Staton. Sunscreen Test Methods-Working for World Harmony. Sunscreen Symposium Florida 2013, Orlando.
 [2] P. Matts. *Back to business: developing and delivering photoprotection*. Sun Protection & Anti-Ageing Skin Care Conference Asia 2014, Singapore.
 [3] S. Miksa, D. Lutz and C. Guy. *Development of sunscreens: Basis for efficacy formulation*. EuroCosmetics, August 2014.
 [4] S. Miksa, D. Lutz and C. Guy. *In Vitro UV Testing: Robot vs. Human Spreading for Repeatable and Reproducible Results*. Cosm. & Toil., October 2013.
 [5] S. Miksa, D. Lutz, C. Guy and B. Tiplamai. *Advantages of In Vitro sun protection assessment methods*. SPC Asia, November 2014.

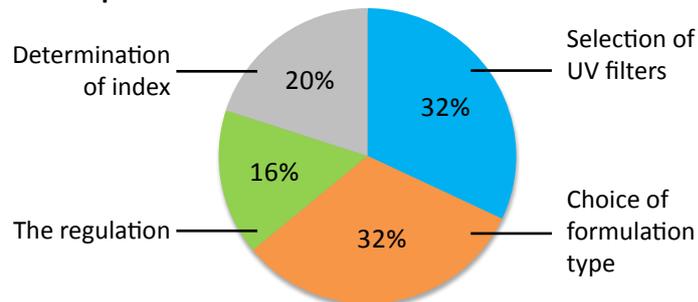
1/ What do you expect from regulation in future?



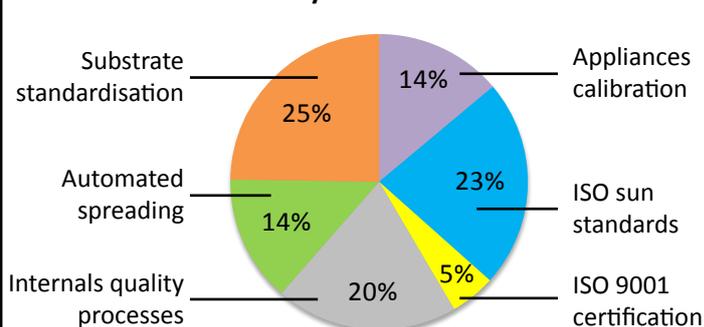
2/ What kind of action do you expect from health authority in term of sun risk prevention?



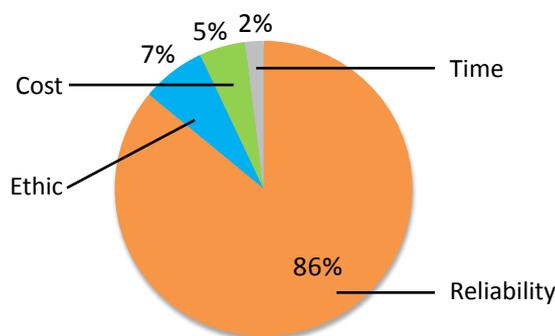
3/ Except the cost, what is the key point for sunscreen development?



4/ In your opinion, what is the most important criteria which ensures reliability of the In Vitro test?



5/ What is for you the most important criteria about sun protection test?



6/ Use of In Vitro tests?

Nowadays, as an evidence, the In Vitro tests are used in priority for the development of a product and for claiming the sun protection level. Nevertheless, the use of In Vitro tests for quality control could be a very powerful tool as it has been already demonstrated.^[6-7]

7/ Confidence level about methods?

Based on these results, it seems that people have a high confidence in the In Vivo methods, a middle confidence in In Vitro tests and low confidence in the In Silico proposal.

8/ «Additional» sun protection claim?

These results show clearly and confirm the need to claim the photostability level of a sunscreen product. Indeed, it seems logical that the level of sun protection should be challenged during time of use for customer safety.

9/ Worldwide regulation knowledge?

Through this map, it appears that health authority in some countries should be more clear about the solar regulation as it is the case for Africa. Anyhow, it is important to remind that majority of participants are based in Europe even if different persons come from different countries all over the world.

10/ Laboratory testing & Certification?

Beyond the 2 most important certifications with the GLP and ISO 9001, it is not surprising to see that the people would like to chose a laboratory for performing sun protection testing with a future label or standard for solar test.

Finally, we received different comments whom the most interesting are available here below:

1. I strongly believe we should no longer talk about SPF values as numbers but talk about UV absorption in ranges - low, medium, high, very high UV 'absorption' rather than 'protection'. I prefer the term 'absorption' since everybody has different skin so that one person may consider a product low-protection but another will find it is medium for them. In either case the actual UV absorption should be the same.
2. The «Nano» issue for physical sunscreen filters should be completely clarify.
3. Importance to measure the UVA part and the photostability of sun care product.

CONCLUSION

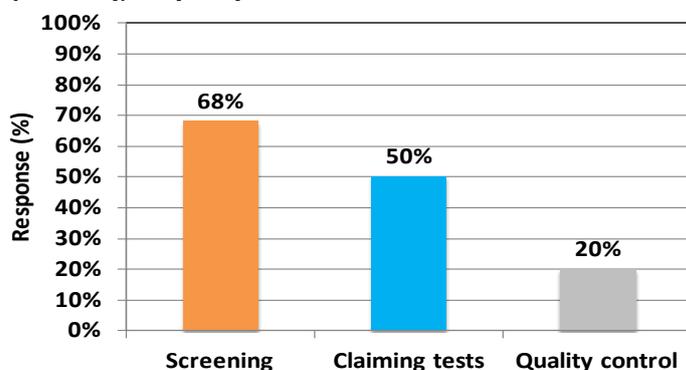
With the fact that the field of sun protection evaluation is continuously increasing, we could attempt to summarize this study into a single sentence:

«Simple and reliable worldwide methods for sun protection evaluation performed by qualified laboratories»

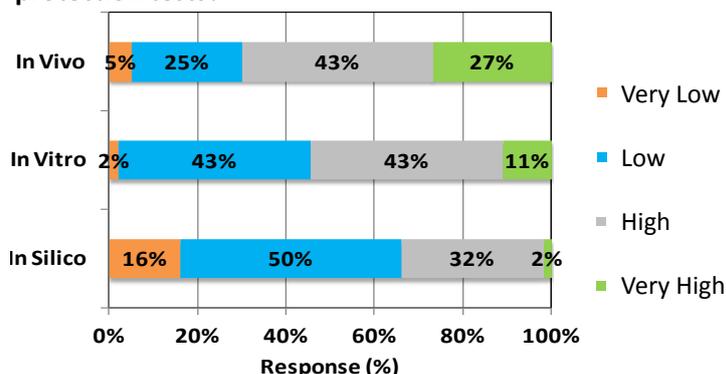
[6] D. Lutz and S. Miksa. *In vitro comparison - A new accessible and reliable statistical method to compare the global UV protection properties of cosmetics.* H&PC Sun Care, July/August 2013.

[7] D. Lutz, S. Miksa and C. Guy. *Sunscreen products: Some practical applications for a new comparison test method to help Development and ensure Quality Controls.* H&PC Today, November/December 2014.

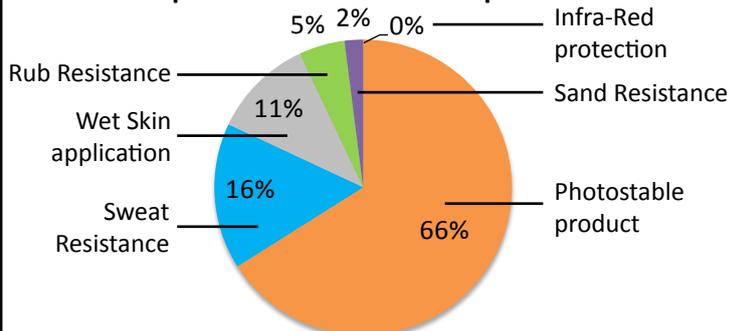
6/ Usually, why do you use the In Vitro tests?



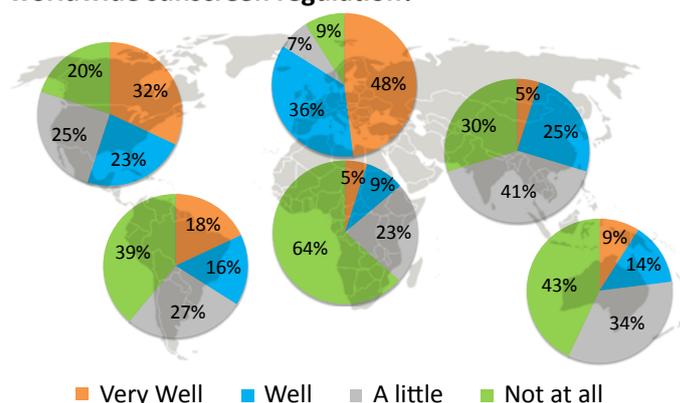
7/ What is your confidence level about reliability of sun protection tests?



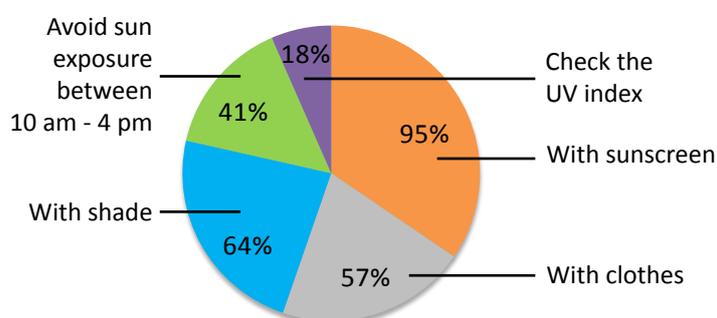
8/ Except the Water Resistance, in your opinion, what is the most important «additional» sun protection claim?



9/ Do you know the minimal solar test required about the worldwide sunscreen regulation?



Special/ Do you protect your skin from sunrays?



10/ Do you prefer a certified laboratory in order to perform the sun protection testing?

