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HelioNews

CELEBRATING ORIGINAL SPECIAL REPUBLICATION 15 years 1999-2014

The current events of the sun protection proposed by HelioScreen

Summary

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Updated version

Few modifications have been performed (highlighted with *)in order to avoid misleading in comparison with original version in French.

Reference spectrum: A stake for calculation of the SPF!

Editorial ...

This issue is publish at the same time as the twentieth edition of « In Cosmetic » in Paris where we will exhibit. It is also a birthday for our laboratory which has just crossed its tenth year.!

Our laboratory has always been atypical. It has been created on a very strong conviction . At that time there was no market and we propose not validated methods most often not recognized otherwise very criticized, It was the continuation of a previous job in the field of in vitro evaluation It started in another context with industrial partners. All were members of the COLIPA within a work team which has continued further on. I have never forgotten to refer to that time and these people, when I recall now our technical knowledge. Our basement is the long term benefits of this intense job together and part of knowledge of these industrialists

Much more than the purpose of a quick, growth commercial development ,our main objective was to continue to put a lot into the development and the knowledge of these methods with all the national or international actors.

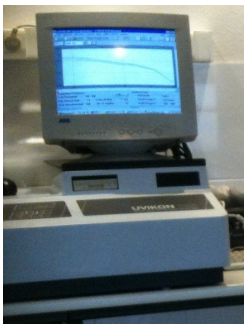
While the most part of the laboratories used TRANSPORE or quartz, we had introduced PMMA HELIOPLATES in 1999 (the first one plates PMMA sandblasted stemming from our workgroup), It has been a challenge to offer a product really adapted to the needs in 2008 with the HELIOPLATES HD. The time passed and the structure of our laboratory is more "conventional" today. We were forerunners and it will remain a definitive experience. We were professional AND there nothing is never acquired definitely:

We know that even if these methods require some more of work to be the reference in control, the time is not far or as for testeurs in vivo, the need of reference and strict quality will impose both upon the laboratories of tests and upon the used substrate.

We are ready for it.
DL

Introduction

We studied in a first part published in HelioNews n°8, the influence of the spectra of the source The historic choice of the spectrum proposed by B Diffey in his publication of reference (1) which was that of the sun (midway midsummer sunligh for southern Europe (Latitude 40°N zenithal sun Angle 20 °, thickness of the ozone layer 0.305 cms), (2) (3) gave values which seemed rather acceptable, very close to the spectra of Albuquerque. Colipa following the principle which the in vitro tests had to feign on best the conditions of in vitro test proposed for the widely recognized and accepted method UVA (4) a spectra "SSR source » close to the lamp of institute for evaluation of the SPF in vivo according to the international method (5).



It was demonstrated with the choice of this curve, the same measure could lead to a calculation of different « spf » which had been called SPF « sun » and SPF « institute ».. (see part 1)

The stake being to transform the value measured in a final end point and as this one has to be the closest as possible of the end point *In Vivo. It* had been proposed a pragmatic way for the choice by the observation of the results of correlation in both cases of figure.

> ***"Starting from « theoretical curves », the change of the values leads to a different index for the same measurement."***
>
> *See Part 1 HN n° 8*

The result cannot be estimated on a number restricted of products because it was demonstrated on the basis of the calculation of the SPF « sun » and SPF « institute ».. of a high number of products than a small but not negligible part number of products gave results which can go from the simple to the double. The choice of a number limited of products would give an indication false on the reliability of the correlation in both cases.

continuation page 2 …

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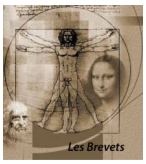
Patents ...



- **Brevet WO2010006854** déposé le 21/01/10 par Unilever sur : SUNSCREEN COMPOSITE PARTICLES AND POROUS PARTICLES IN COSMETIC COMPOSITIONS
The invention concerns an including cosmetic composition:
- Dissimilar particles of an agent of sun protection and a sociable disposition polyamide polymerized by condensation
- A polymer in not hydrosoluble powder in the form of porous particles possessing a value of absorption of oil (castor oil) included between 90 and 500 ml / 100 g
- And a vehicle acceptable for cosmetic. The aforementioned composition possesses an excellent property of effect of vagueness which allows to hide the cutaneous imperfections, and a property of photoprotection rela-

- **Patent EP2153817** published on 17/02/10 by Oréal on: Sunscreen kit

The present invention concerns a kit of photo protection of the Keratinised materials against a brilliance UV in the range above 280 nm covering the UV In and the UV B, understanding at least two packaged different compositions separately, the aforementioned kit containing at least a compound (X), at least a compound (Y), and at least a filtering system hydrophobic containing i) at least an organic sun filter hydrophobic (A) capable of absorbing the brilliances UV from 320 to 400 nm and at least an organic sun filter hydrophobic (B) capable of absorbing the brilliances UV of 280 in 320 nm, and possibly a mineral filter (D); ii) at least an organic sun filter hydrophobic (C) capable of absorbing simultaneously the brilliances UV of 280 in 320 nm and 320 in 400 nm, and possibly a mineral filter (D); Or iii) at least an organic sun filter hydrophobic (A) capable of absorbing the brilliances UV from 320 to 400 nm and at least either an organic sun filter hydrophobic (C) capable of absorbing simultaneously the brilliances UV of 280 in 320 nm and 320 in 400 nm, or a mineral filter (D); the one at least the aforementioned compounds (X)

Patent WO2010026755 published on 11/03/10 by SHISEIDO CO LTD on: COSMETIC PRODUCT OF SUN SCREEN
The invention concerns a cosmetic product of sun screen which can prevent a tint due to the secondary membership{*support*} of this one in a garment. The invention concerns a cosmetic product of sun screen which contains of l'hexyl-diéthylaminohydroxybenzoylbenzo ate, characterized in the fact that: (1) the aforementioned product contains ester's oil; (2) the aforementioned product does not contain powder of zinc oxide of oxide of titanium, and (3) this one was prepared under the shape of a composition of emulsion of type water-dans

.. It happened under the sun

Actuality :

In March, the FDA banished the use of the cabins of sun tanning for the young people of less than 18 years.

A bit in countercurrent of the caution which is granted to the use of the nanotechnologies in cosmetic, a dermatologist of the university of North Carolina, advocate for nanotechnologies in the solar energy and the products anti-age.

Exhibit in 2010
in-cosmetics
Paris, France **Apr 13-15, 2010**

40th CED Annual Meeting
Barcelona, Spain **Apr 14-15, 2010**

NYSCC Suppliers' Day
Edison, NJ, USA **May 11-12, 2010**

5th World Congress on Emulsions
Lyon, France **Oct 12-14, 2010**

in-cosmetics Asia
Bangkok, Thailand **Nov 02-04, 2010**

In The Observatory of cosmetics:

The ethical commitment of the cosmetic brands

The charm of the brand for the ethical posting is a rather recent phenomenon, which dates the beginning of the 80s. Today, the ethics becomes a "leading driver": the consumer sees the occasion there to make a useful purchase, " to do good " around him, while offering itself the product of his choice. What is it in the cosmetic sector? It was the subject of the 5th session of the Morning of the Cosmetic ™, that was held on March 16th, 2010.

Label bio European: the big operations:

What will be the label bio dominant of tomorrow? While Cosmos still skates and that new repository one European is in preparation towards Colipa

Spectra of reference :

Once again, it seems that to study a big number of products at the same moment by *In Vivo* and *in Vitro* methods , then realize the calculation of the *in Vitro* SPF with both curves would allow us to have a good appreciation of what seems to be "the appropriate curve" in terms of correlation

Methodology

Grace in a long-time partnership with the group DERMSCAN, we had the opportunity to be in a very rare configuration, that to be able to compare a big quantity of products measured either In vivo and in vitro in respectively identical conditions and to compare so the curves of correlation.

It is noticeable that too many studies of correlation seem from ou point of view, to have been led on a number restricted by product or with In Vivo values determined in too different conditions to give significant results.
A first part of the study was led without pre irradiation and without knowing the level of photo stability of considered products We may suppose it will have had an influence on the final correlation.

This problem of the degradation due to the photo stability of certain products is problematic because except if we pre irradiate, hypothesis on which we do not allow to give a clear-cut opinion), it is always risky to measure at the same time products photo stable and products photo unstable when it is a question of establishing a correlation.

We wanted to estimate the influence of this parameter but however without pre irradiation before the measure. We did not thus apply a dose of irradiation which would have been subject to discussion, we preferred to estimate SPF $_{«»}$ and SPF $_{«e»..}$ at a first step and then, we irradiated arbitrarily products in the only purpose to classify them in products «photostable or not » . We state photostable when the residual efficiency was superior to 85 % in the total UV .The dose of irradiance being fixed at one hour in the Suntest which correspond approximately to 4 MED .

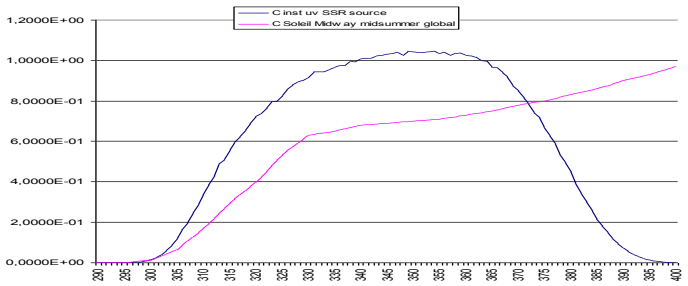
Conditions of measurement: 1st study

– In Vitro (HelioScreen labs) according to the describe Diffey derivate method (Determination of the in vitro SPF (Cosm toil. 118 (2003))(6)
– In Vivo (Dermscan group) according to International method.
• Substrate PMMA 6 microns (helioplates HD 6) (7)
• Quantity 1.3mg/cm²
• *121 Products from several suppliers (before in vitro testing) and then measured in vivo.*

This procedure avoids us going into the perennial debate of the aptness of such or such dose, unique or variable etc. which allows to feign the conditions of the test in vivo and which affects the in vitro result which becomes variable . We thus observed results on the initial, not degraded products, then we compared the results obtained for the products which degrade and those who do not degrade.

It has been then determined the linear regression with the origin of the curve , the slope and the coefficient of correlation.

A stake for the calculation of the SPF (...following page 1)



1st study on products without knowing their possible photo instability

This first test was led on 121 products which were measured by according to the international method by laboratories Dermscan between 1/01/2008 and the 31/08/2008. They were sent to our laboratory without the other indication than the value found in vivo and we measured them within less than 2 months according to the method described in the publication of Pissavini and Co (6), to which we had contributed Nevertheless, we used the HELIOPLATE HD6 proposed by our company.

It was not possible to verify afterwards the photo stability on these products because the workload would have been too important but we decided to continue the study with the following products by determining on a new group of products which were or not photo unstable as described previously.

2nd: study on products by estimating their photo instability

A second study has been realized in very similar conditions on 64 new products in the second half of the year 2008.

A 4 MED irradiation was applied on all the samples, after testing, just to classify the photos table products or not on the basis of the method and criteria indicated previously.

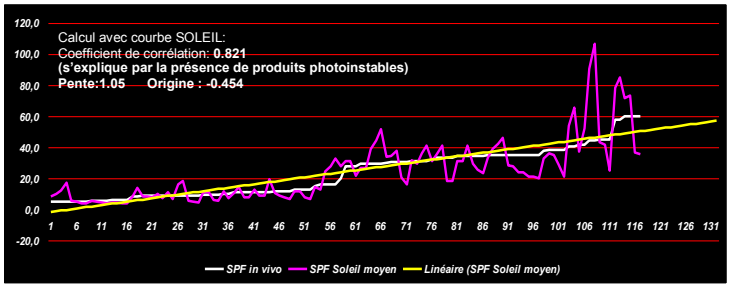


Fig 1 Curve of correlation between the evaluations *In Vivo* and *in Vitro* with the curve « » « SUN»

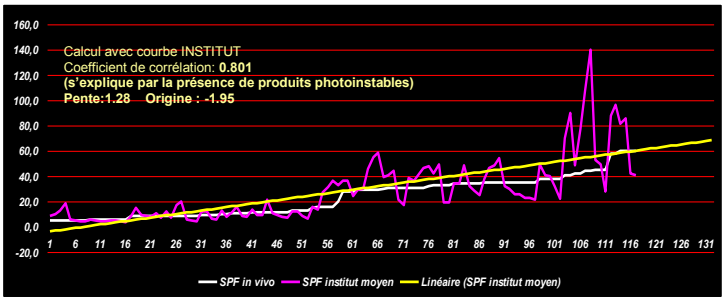


Fig 2 Curve of correlation between the evaluations *In Vivo* and *in Vitro* with the curve « INSTITUT »

Results

The results were classified by increasing values SPF in vivo estimated from 5 to 60 according to the white curve of figure 1 to 5. The results of the in vitro evaluation was put back on the purple curve for each results found by in vivo evaluation. A curve of tendency in yellow was established for the in vitro results.

In the first study (fig 1 and 2) or he cannot be distinguished products stable photo or not, the coefficient of correlation unless globally satisfactory considering the number of products observed was relatively weak (around 0.8) Certain individual values remain however unacceptable .We can not state ifif the photo instability is the cause We notice however a light improvement of the correlation with the curve of the "SUN".

During the second study, was estimated at first all the products then these were separated according to their photo stability. On 64 products, 40 were finally considered photo stable and 24 photo unstable. They were distributed in two groups and compared with the results In Vivo.

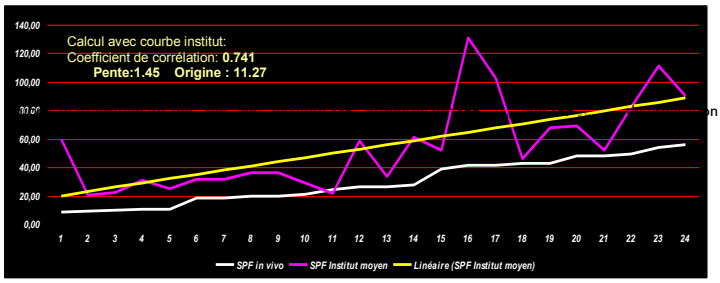


Fig 3 Curve of correlation between the evaluations *In Vivo* and *in Vitro* of photo unstable products with the curve « INSTITUT »

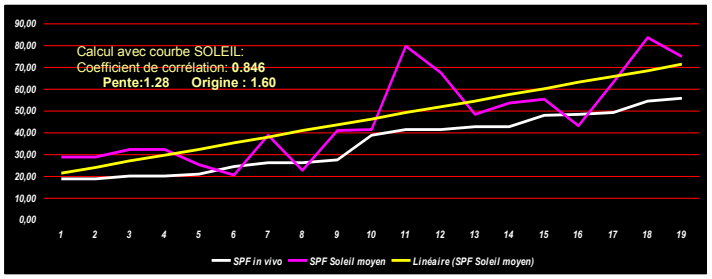


Fig 4 Curve of correlation between the evaluations *In Vivo* and *in Vitro* of photo unstable products with the curve « SUN »

Between the products which did not degrade later and those which have been degraded influences the level of correlation. is strongly affected Without foreseeing the dose of irradiation, there is demonstration that that this can influence in a very significant way the final results and must be taken into account.

The level of correlation for the products which did not degrade later is completely satisfactory. Even if we note some products with great different results In Vivo and In Vitro the correlation seems completely acceptable in that case.

For all the products but paradoxically in a way more marked for products unstable photo, the correlation is better with the curve «SUN ».

We observe that this difference is especially due to some products very over estimated with the curve "institute" rather than to all the products. This observation is completely in agreement with the difference of spectres led in the first part of the study.

Conditions of measurement: 2nd study

– In Vitro (HelioScreen labs) determination according to the describe Diffey derivate method (Determination of the in vitro SPF (Cosm toil. 118 (2003))(6)

– In Vivo (Dermscan group) determination according to International method.

•Substrate PMMA 6 microns (helioplates HD 6) (7)

• Quantity 1.3mg/cm²

• 64 products (composition unknown) (from different suppliers) :40 photo stable + 24 unstable (evaluation of the photo instability after testing.

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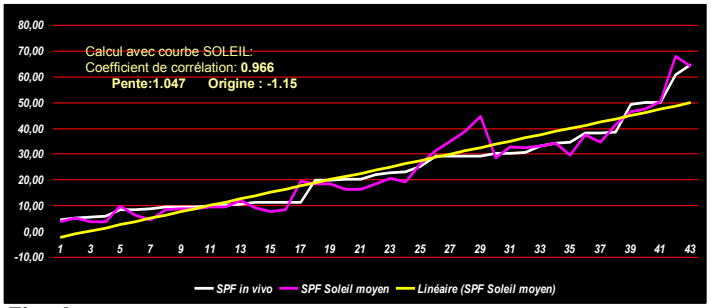

Fig 6 Curve of correlation between the evaluations *In Vivo* and *in Vitro* of photos stable products with the curve « SUN »

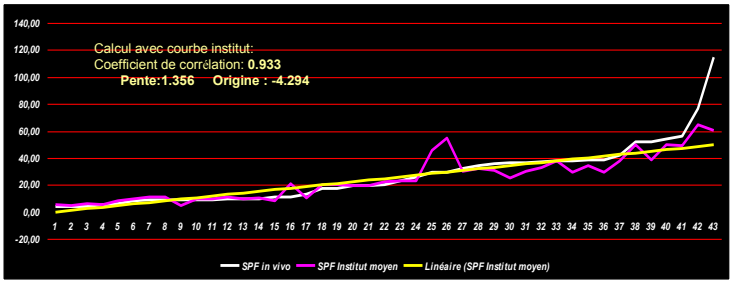

Fig 5 Curve of correlation between the evaluations *In Vivo* and *in Vitro* of products photo stable with the curve « institute»

Conclusions

The results of both studies were obtained on products of the market and the number of studied products can lead to a good representativeness of this one although it is not possible by the nature the study to identify them. The galenic forms seemed however very varied.

In spite of the presence of photos table and photo unstable products in the first study, the correlation stays any acceptable fact for the majority of products but it is noticed by the unacceptable differences notably with the reference curve institute

For all the products but paradoxically in a way more important for products photo unstable , the correlation is better with the curve « sun».

We observe that this difference is especially due to some products very over estimated with the curve institute rather than to all the products. This observation is completely in agreement with the difference of spectrum led in the first part of the study.

[1] « A new substrate to measure sunscreen protection factors throughout the ultra violet spectrum. B.L Diffey et J Robson JSCC 40-127-133 (May June 1989)

[2] "Report LA-UR-83-728. Los Alamos National Laboratory (1983) SA W Gersl A Zardecki H L Wiser

[3] P. Berner, "Approximate values of intensity of natural ultraviolet radiation for different amounts of atmospheric ozone." *Final technical report DAJA 37-68-C-1017, European Research Office, US Army, London (1972)*

[4] "Method for the *In Vitro* determination of UVA protection" provided by sunscreen product guideline 2007 The Colipa *In Vitro* protection methods task force

.. Guide Line: Use of the sun filters in the world ..

Filter designation	Reference	USA	Canada
		% maxi	% maxi
Ethyl Dihydroxypropyl PABA			5
Padimate O	21	8	8
Octyl methoxycinnamate (Octinoxate)	12	7,5	8,5
Octyl Salicylate (Octisalate)	20	5	6
Glyceryl PABA			3
Homosalate	3	15	15
Menthyl anthranilate		5	5
Octocrylene	10	10	12
Aminobenzoic Acid	1	15	15
Phenylbenzimidazole Sulfonic Acid (Ensulizole)	6	4	8
Terephtalyidene Dicamphor Sulfonic Acid	7		10
Titanium dioxide	27	25	25
Trolamine Salicylate		12	12
Zinc oxide		25	20
4-Methylbenzylidene camphor			6
DEA Methoxycinnamate			10

Strange allusion

After its boxer shorts for firm up and its refresching knee socks, the French laboratory of cosméto-textile Skin' Up proposes this time, capillary terry towels / care: packaging of the cosmetic micro-capsules

Companies information

According to a publication of *cosmeticnews.com* of 22/02/10, the profits of L'Oréal fell down of 8 % in 1,79 billions € in 2009, sales having fallen of,4 %. The division of luxuries underwent the strongest fall with 9 %. Companies{*societies*} as Garnier and Maybelline ended in increase with regard to 2008. The group is confident for 2010.

As the Japan market has became more restricted because the population has aged , and to penetrate the market of natural cosmetics, the Japanese company SISHEIDO , has purchased the UX company BARE Escentuals.

This company dedicated in natural cosmetic is located in California.

Bare Escentuals propose products based on mineral. The distribution ias made throw department stores and boutiques. Sisheido has the goal to realize half of its sales in the international market.

Scientific articles

International Journal of Dermatology, Volume 49 Issue 4, Pages 362-376

Defining the patient at high risk for melanoma - Estee L. Psaty, BA, Alon Scope, MD, Allan C. Halpern, MD, and Ashfaq A. Marghoob, MD

The authors propose a questionnaire allowing the practitioner to identify the patients risking to develop a méeanom.

In this practical review, we aim to help clinicians identify patients who are at significant risk of developing malignant melanoma. Universal screening is challenging, thus it is important to effectively single out patients who have a high risk of developing the disease. We provide a summary of pertinent questions to review when taking the patient's history, point out the phenotypic features to note during skin examination, and suggest risk stratification as a means to plan initial and long-term surveillance strategy. We mention personal and family history of melanoma as prime risk factors for melanoma, yet the review also focuses on the patient who has no history of melanoma, either in himself or his family, and the proper ways to evaluate his likelihood of developing the disease.

International Journal of Dermatology, Volume 49 Issue 4, Pages 406-409

Cutaneous melanoma in a desert climate zone: a retrospective study of 125 cases - Zahra Rahnama, MD, Simin Shamsi Meymandi, MD, and Nasim Nasiri, MD

Les auteurs étudient la relation entre les populations à peau pigmentée e le mélanome.

Background With increasing incidence over the last few decades, cutaneous malignant melanoma (CM) represents 3% of all skin tumors, and accounts for 75% of all deaths because of cutaneous malignancies. Little is known about the nature and epidemiology of CM in individuals with pigmented skin.

Method Data were collected from the records of four public and private histopathology laboratories of Kerman city from March 20, 1994 to March 20, 2004. Skin biopsies with a diagnosis of CM were reevaluated to confirm the diagnosis of CM. The medical records of the patients were also taken into consideration.

Results A total of 125 CMs were found. The male-to-female ratio was 1.08 : 1. The mean age at the time of diagnosis was 58.9 years; with a peak in the seventh decade of life. Acral-lentiginous melanoma (ALM) represented 28.8% and; nodular melanoma occurred in 20% of cases. Limbs were the site of occurrence in 44% of tumors; whereas 36% of tumors occurred in head and neck region. There was a significant correlation between age and ALM (P = 0.007) and also between gender and melanoma types (P = 0.024).

Conclusions This study indicates that some demographic and histopathologic features of CM in this population differ from those in the literature. More studies including cohort studies are needed to fully describe the nature and survival rate of CM in this area.

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