



the science of beauty

Vol 6 No 5

April 2017



BIOTILYS®

Microbiome Balance & Diversity

BIOTILYS® draws its benefits from probiotics through biotechnology.
The result – an optimised fermentation of *Lactobacillus pentosus*.

It promotes the balance and increases diversity of the cutaneous microbiota.

BIOTILYS® reinforces the skin barrier, allowing it to withstand aggression, and maintain hydration.

This innovative, preventive and protective active promotes a healthy and beautiful appearance, with smooth skin and a bright complexion.

Visit us at Booth # 1 & 2 at the 2017 ASCC Conference
3 – 5 May, 2017 – Twin Waters, Sunshine Coast



A S HARRISON & CO PTY LIMITED
75 Old Pittwater Road, Brookvale, NSW 2100
T: +61 2 8978 1000 F: +61 2 8978 1050
E: ash.sales@harrison.com.au
W: www.asharrison.com.au

Established
1923



MOM

Utterly a mother. Utterly a woman.

WOW

Being a mother or being a woman? Why not both? 100% mother & 100% woman. Choose being a WOW MOM with the ultimate beauty survival kit from Lubrizol. A selection of four complete formulations with the best combination of powerful and effective ingredients to care for your skin in the most efficient way.

Accelerating your creativity



© 2017 The Lubrizol Corporation

VISIT US AT ASCC CONFERENCE – 3-5 MAY – SUNSHINE COAST, QUEENSLAND

contents

Vol 6 No 5
April 2017



Business

- 10 **How to Handle Clients Who Just Don't Turn up**
Pam Stellema
- 12 **Why airless Packaging**
Steve Welsh
- 25 **Mark your Dairy**
- 34 **Why Use an Insurance Broker**
James Gillard
- 47 **Alternative Facts**
Margaret Smith



Technical

- 53 **3R –Effect for Regulation of oily Skin and Balance of Healthy Skin Microflora**
Eisenberg, Hanau, Heider, Klerfield, Bicard-Benhamou, Driller and Pifucker
Merck, Germany

Educational

- 18 **Three Top Trends**
Belinda Carli
- 38 **Formulator's Forum**
Ric Williams
- 44 **Quiz Time**
Wendy Free



ASCC

- 18 **ASCC President's Report**
Matthew Martens
- 30-33 **ASCC Annual Conference Information**

Advertisers

- 2 **A S Harrison**
- 3 **Lubrizol**
- 5 **Azelis**
- 9 **Dermatest**
- 14 **Bontoux**
- 15 **Concept Chemicals**
- 17 **Ultraderm**
- 19 **Merck**
- 21 **IMCD**
- 22 **All Colour Supply**
- 25 **Ozderm**



Skin

- 23 **Promising Results for Scar Treatment**
Emanuela Elia
- 25 **Supporting Skincare Claims**
John Staton
- 26 **Hyperhidrosis – Excessive Sweating**
Tina Aspres



Beauty is in the chemistry

Azelis is a leading global provider of high-quality ingredients, with over 3000 customer concept formulations, an extensive network of laboratories and research centres, and a dedicated team of 170 personal care specialists around the world.

Our global focus is built upon a regional approach to creating formulations that meet specific local demands. While sharing trends and expanding insights that enable us to place our knowledge, agility and technical expertise fully at the service of our customers.

Because when the chemistry is right, the future looks beautiful.

Visit the Azelis stand at
ASCC, booths 18 & 19.

**creating value,
growing together**

visit azelis.com





The Science Of Beauty

ISSN: 1837-8536

Published Bi-monthly
(January March May July
September November)

www.thescienceofbeauty.com.au

Publisher

Manor Enterprises Pty Ltd
ABN 32 002 617 807

Editor

Joy Harrison

All correspondence should be sent to
The Editor

The Science of Beauty
PO Box 487

GULGONG NSW 2852

Mobile: 0418 541 998

Email: joyh@ozemail.com.au

Advertising

Tony Harrison

Advertising Manager

PO Box 487

GULGONG NSW 2852

Mobile: 0429 165 156

Email: tonyhar@ozemail.com.au

Subscriptions

The Subscription Manager

(PO Box 487 Gulgong NSW 2852)

\$66.00 (per year) incl P/H (Aust. only)

\$106.00 (2 year) 20% discount

Disclaimer

The viewpoints and opinions expressed in the articles appearing in this magazine are those of the authors. The Publisher takes no responsibility for the information supplied.

meet the team...



LISA DELLA-BOSCA Lisa has been a professional skin therapist working in the industry for over 30 years.

After the first couple of years as a beauty therapist, Lisa had a driving force to understand the cause and treatment for the clients skin disorders she was managing, but at this stage could only treat superficially. The solution was to study natural therapies. For over 25 years Lisa has married the science of natural therapies especially nutrition with skin science with skin therapy to gain solutions for skin disorders and skin conditions.

AUDREY PARATORE is a professional skin practitioner experienced in many aspects of professional, complimentary and paramedical skin care. She has more than 10 years experience as a Senior Lecturer in Vocational Education and consults for a number of leading skin care companies. Audrey describes herself as a life student of skin science and derives fulfilment in sharing information with other Skin Therapists empowering them to further their careers and bring awareness to the privilege of working hands-on with clients.



WENDY FREE has degrees in Science (B.Sc) and Technology Management (M.Tech Mngt) and is a member of a number of industry associations including Australian Society of Microbiologists, Royal Australian Chemical Institute, Association of Therapeutic Goods Consultants and is a Fellow of the Australian Organisation for Quality. With more than 25 years industry experience, Wendy's current roles include APVMA GMP auditing, contributing to the Cochrane Collaboration and on a day to day basis, Scientific Director Quality Matters Safety Matters Pty Ltd (QMSM) that has over the last decade Wendy has provided expertise to over 400 Australian and International businesses. She specialises in regulatory compliance, commercialisation, troubleshooting and GMP systems, and considers cosmetics amongst the most challenging and enjoyable part of her work.

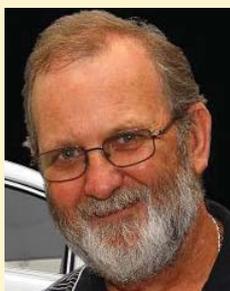
PAM STELLEMA is a business coach (www.salonsavy.com.au) and specialised copywriter (www.salonspacopywriter.com) for salons, spas, clinics and industry suppliers.

Her goal is to help her clients generate greater profits, which she does through her coaching, copywriting, courses, articles and books.

If you'd like to contact Pam, you can phone her on 0431 975 515 or send her an email via either website.



JOHN STATON has a background of over 40 years experience in the pharmaceutical and healthcare industries. John is a life member of the ASCC and serves in a number of industry representative roles with ASMI, ACCORD, TGA and Standards. He is the Australian representative to the ISO Committee on Sunscreen Testing-TC 217. (The committee for development of sunscreen standards). John is also in demand as a speaker on the International Conference Circuit.



RIC WILLIAMS was educated in Sydney obtaining his Bachelor of Science in Pure and Applied Chemistry from the University of New South Wales (1980) and a Diploma of Environmental Studies from Macquarie University in 1983. Ric has had 40 years experience in the industry working for many companies and operating his own consultancy business for many years. He has presented many lectures and workshops at national conferences for the Australian Society of Cosmetic Chemists (ASCC), the Association of

Professional Aestheticians of Australia (APAA), Cosmetic and Pharmaceutical Special Interest Group (CAPSIG) and also beauty colleges nation wide.



MARG SMITH is the owner of Syndet Works – an Australian company established in 1984 to formulate and produce soap free skincare bars. Syndet has developed an enviable reputation for custom formulated and manufactured skincare that now extend well beyond the origins of the business.

TINA ASPRES has worked as a Pharmacist for almost 20 years in retail, industry and academia as well as being a Cosmetic Chemist. Currently she works in industry and has vast experience in both the pharmaceutical and healthcare arenas. In addition to this she is a casual academic at UTS, School of Health, (Faculty of Pharmacy in Pharmaceutics). Tina has a great interest in clinical research in dermatology and the treatment of skin disease and conditions and is Clinical Trial Coordinator at South West Sydney Dermatology. She is a keen researcher in transdermal drug delivery systems. Tina is a Member of the Pharmaceutical Society of Australia and a Member of the Australian Society of Cosmetic Chemists. She regularly consults pharmaceutical companies in the area of acne, eczema and skincare especially in the area of cosmeceuticals and has devised and written numerous support, training and education material for companies aimed at both professionals and consumers. Tina consults for the Eczema Association Australasia and is on their Integrity Assessment Panel and has worked with Choice Magazine on numerous reports. Tina has presented at the Annual Scientific Meeting of the Australasian College of Dermatologists and has published within the pharmacy and medical literature in the area of sun protection, Vitamin D, skin cancer prevention and eczema as well as co-authoring the book 'All About Kids' Skin – The Essential Guide' published by ABC Books



EMANUELA ELIA is the Director of Ozderm, which specialises in *in vivo* testing and clinical trials for cosmetic and personal care products. Emanuela Elia has a law degree from Rome and a Master of International Business from the University of Sydney. She had collaborated with Australia's longest serving Contract Research Organisation Datapharm for a few years before setting up a cosmetic and personal care products testing facility in 2009. Emanuela is enthusiastic about improving the quality of cosmetic and personal care products' research in Australia through science.



WENDY LOCKYEAR founder and principal of Advance Massage Australasia has been in the natural and remedial therapies industry since 1972 and is an accredited member of the Australian Traditional Medicine Society, and an accredited training provider with over 26 years clinical experience and over 18 years in education, training and instructional skills, teaching a wide variety of remedial modalities from general interest and post graduate workshops to accredited units up to an Advanced Diploma level, Wendy travels extensively

and delivers regular annual seminars. Wendy specialises in delivering her courses and workshops one or two on one and recommends this for any one seeking a maximum level of competency based training.



EMMA SUTHERLAND is a successful naturopath and TV presenter, her mission in life is to inspire women to get their "Mojo" back. She is the expert nutritionist on the Logie nominated "Eat Yourself Sexy" on LifeStyle You. She is also a key contributor and expert panellist for the recently launched Woolworths Baby & Toddler Club. With over 10 years experience working with women, Emma is the woman to turn to if you want your Mojo back!

BELINDA CARLI is the Director of the Institute of Personal Care Science (www.personalcarescience.com.au), an International Training Organisation providing Certificate and Diplomas via distance education in the formulation, development, brand management and regulatory affairs for personal care and cosmetics. She is a regular presenter at major International events and her work can be found in many national and International publications and Special Chem formulators site. She is the Official Technical Advisor to the in-cosmetics Group internationally and has written five books on Beginners and Advanced Cosmetic Formulation, Organic and Colour Cosmetic Formulation and Brand Management.



STEVE WELSH is a cosmetic packaging specialist with over 20 years experience across all mediums of packaging. As the director of Weltrade Packaging, Steve leads a team of designers, technicians, printers and supply chain professionals. To ensure the best exposure of your beauty, skincare or cosmetics brand. Steve's philosophy is to design your packaging correctly, right from the start, so you can elevate your brand and move more product. Steve works closely with leaders in the cosmetic industry to ensure that your

packaging consistently stands out on the shelves within this highly competitive market.



JAMES GILLARD is the Principal of Insurance Made Easy whose services include – business insurance, travel insurance and financial services. Insurance Made Easy has a client list of over 2000 businesses from all industries. The relevant major insurance schemes are – Hair and Beauty, Pharmaceutical Companies and Natural Therapists.

Why use an insurance broker for all your business insurance needs?

The disruption to thousands of businesses after the recent cyclone in Queensland should be a timely reminder of how important it is to have the right advice for your insurance needs.

Managing your own insurance requires a great deal of expertise and you will most likely not have the sufficient skills to identify your insurance needs to select the right cover for your business.

Running your business may leave you time-poor and the taking on the task of organising your insurance needs can be a stressful process. It can be a distraction from the main focus of your business activities.

A qualified broker will provide the experience and advice to get it right the first time.

How to select your insurance broker?

Member of an Association? Are they members of the National Insurance Brokers Association (NIBA) the peak body in the insurance industry for insurance Brokers.

Member of an Insurance Group? Are they members of an insurance broker group such as Steadfast. This provides peace of mind for you knowing the insurance broker has the strength of a large

organisation behind them

Expert Knowledge and Professional Advice. Choosing a Broker who understands your business needs and the industry you trade in, is an essential element of choosing the appropriate Professional for you. Someone who understands your industry will be able to recommend the most comprehensive and competitive covers.

Business Owners should also consider the range of services offered by the Broker and the payment process available

Personalised Services. Your insurance Broker should spend time assessing the risks and investigating the right policy to protect your business.

You should look for:

- The competitive advantage of the firm over others with particular attention to their experience in your industry.
- How they propose to identify your insurance needs.
- Level of commitment when it comes to renewals, policy changes and claims.

Additionally will the Broker be available after hours and do you have the option of dealing with one account executive that you are comfortable with.

Claims Management. The claims process and service you receive is integral



by James Gillard

to choosing your Broker. Having the right representation from your Broker relieves much of the stress at this time. Your Broker is your advocate and will be assisting you with the claims process as well as monitoring the claim until finalisation.

Using an insurance Broker will save you time and money because they can provide you with expert knowledge, advice, and negotiate competitive premiums on your behalf.

If you are unsure about your current coverage and need a professional advisor to review your policy or risk, and to discuss your own individual circumstances, please contact the friendly team at IME Insurance Brokers.

Ph 1800 641 260



EVERYTHING UNDER THE SUN

Supporting Sunscreen Development

- **ISO 9001 Quality System Compliant**
- **SPF Testing** - preliminary and full studies to ALL protocols
- **UVA Testing in-vivo** - including JCIA and ISO
- **UVA Testing - in-vitro** - AS/NZS : ISO : FDA : COLIPA



Other services include: Anti-ageing Studies, Wrinkle Studies, Irritation, Corrositex, Dermal Toxicity as well as RIPT, TEWA, Moisturisation and Skin Colour Measurement.

CONTACT: info@dermatest.com.au or visit our website at www.dermatest.com.au

20 King St, Rockdale NSW Australia 2216 | Ph Office: +61 (0) 2 9556 2601 | Ph Lab: +61 (0) 2 9556 3835 | Fax: +61 (0) 2 9556 3361

Supporting product ...innovation...

**WE DEVELOP IT!
YOU OWN IT!**



TecConsult has provided a complete suite of new product development services for over 20 years.

We are an independent company supporting technical and scientific innovation to the Therapeutic, Complementary Medicines, Veterinary and Personal Care industries. Confidentiality can be assured and we assign intellectual property to YOU, the client.



Technical Consultancy Services Pty Ltd

20 King St Rockdale, NSW Australia 2216
P: +61 2 9597 7115 F: +61 2 9556 3361
john@techconsult.com.au
www.techconsult.com.au

Formulation

Analytical

Validation

Stability Studies

**New Product
Development**

how to handle clients who just don't turn up

by Pam Stellema

Client no-shows leave you feeling like you want to pull your hair out on your good days, and completely throw in the towel on your bad days. They're the bane of nearly every salon owner's life, and to top things off, the problem seems to be getting worse and not better.

In this article, let's take a look at why they happen and importantly, what you can do about it to lessen the impact on your business's bottom line.

Research seems to indicate that there are a few stand-out reasons that help to explain client no-shows. Hopefully, once you understand why they're happening, you'll be able to create effective strategies to minimise them as much as possible.

1 Clients simply forget. Yes, it can be as simple as this. The salon clients of today have a great deal on their minds. When there are other important things going on in their lives, it's easy to forget an appointment for a brow shape or bikini wax. It's not that the client doesn't want to have their service, but it's just not high on their list of important things to do.

How to handle it: Always set up some form of appointment reminder. Give your clients sufficient notice of their

pending appointment so that if they discover they can't make it, it won't leave you with a gap in your appointment book that is unlikely to get re-filled. Ensure your reminders include two things:

- a** A request to reply to the reminder. If they don't need to reply, then it gives the client the opportunity to say she simply didn't receive it.
- b** Your salon policy on late cancellations and no-shows. If there's no penalty for not turning up, where is the incentive to do the right thing? *E.g. Failure to arrive will result in a 100% charge for your service. Six hours' notice is required for rescheduling. Thank you.*

2 Clients think that you don't care if they don't turn up. I believe this is more common than many people realise. Scenario: The first time the client doesn't show, her therapist says nothing and nicely asks her if she'd like to make another appointment. The client now believes that it was no big deal that she just didn't turn up, and so keeping her future appointments at your salon or spa becomes even less important to her.

How to handle it: Let me share a quick



story with you. One salon owner I spoke with was having real issues with a particular client who regularly missed her appointments. Eventually the salon owner broached the topic with the client and her response was, "Oh, I thought you would be okay with it because I knew it gave you time to have a cuppa and catch up on some paperwork".

Clients don't always understand the impact this behaviour has on your business. It's up to you to have your no-show and late cancellation policies written and displayed. You must educate your clients about your expectations

Make these clients aware of your salon no-show policy.

when it comes to salon policies and etiquette.

3 Clients believe that getting an appointment with your salon is easy-peasy. If clients believe that getting an appointment with your salon is as simple as picking up the phone and asking for their preferred time and date, then they're not going to be too concerned about missing an appointment. In their minds, getting another appointment will be no big deal.

How to handle it: Always give the impression to your clients that you're almost fully booked in advance – even if you're staring at your appointment screen with only one appointment booked in for the week ahead. If the client believes you have tons of free appointment spaces, then she's not going to be too worried about getting another appointment time and will believe that you need her more than she needs you.

Never tell a client she can 'pick any day and any time' because you have 'loads of empty spots available to choose from'. Instead, use the following technique when taking your appointments to always give the impression that you only have limited free appointment times available.

Client: *I'd like to make an appointment please.*

Salon: Terrific. Would either Tuesday or Thursday suit you?

Client: *Yes, either day is okay with me.*

Salon: Fantastic. I have 2 spots available on Tuesday at 10.30am or 3pm. Which one is best for you?

Client: *I'll have the 10.30 please.*

Appointment made.

This approach allows you to stay in control of your appointment schedule, plus gives the strong impression to the client that you have a busy salon and appointments with you are valuable.

Now, I appreciate that it won't always be this straight forward, however, the strategy is to offer up only a choice of two

things for the client to choose from. A choice of two days and then a choice of two times on the preferred day (generally one in the morning and another in the afternoon). If neither day or time suits your client and she requests a different day, say something along the lines of "Let me take a look and see what I can do for you", pause for a few seconds and then say, "Yes, with a little re-arranging I can fit you in on Wednesday morning at 11.00".

This sends the right impression to the client, and that is that she is booking into a busy, sought-after salon and should value her appointment time. She is far less likely to forget about an appointment that will be hard to replace.

4 A better offer popped up at the last minute. This is something that happens quite often with younger clients; it seems to be a generational phenomenon. Simply not showing up to a pre-arranged appointment has become the norm in their private lives and has now crept into their dealings with their service providers also.

How to handle it: Make these clients aware of your salon no-show policy. Have it on your website, service menus, salon signage, and reminder messages. Charge for missed appointments to show you mean business.

5 There was a last-minute emergency. This happens to all of us at some time when something totally unexpected crops up. It's up to you to decide if the 'emergency' was real or simply a convenient excuse to try and wriggle out of paying for the missed appointment.

How to handle it: If you believe the emergency was real and you have a policy of forgiving the first offence, then let the client know that as it was her first no-show you'll let it go this 1 time, but future no-shows will require a payment.

On the other hand, if you have a client that has repeated 'emergencies', then it's time to get tough. One way to handle

this is to ask the client to prepay for her services. Make it non-refundable and let her know that if she doesn't turn up, she won't get her money back or a replacement appointment.

If she balks at paying up front, chances are she was most likely not going to show up anyway, and you would have been left without income for that time.

Note: Unless you have a very secure system, I advise *against* asking for a credit card number to 'hold' against her appointment. There is some doubt over the legality of doing this. Best to simply process the payment in full over the phone at the time of making the appointment, and either send an electronic receipt or issue it to her when she arrives for her appointment.

Other strategies to consider:

- All large bookings, such as bridal parties, should be asked to pay a substantial and non-refundable deposit. A large party no-show will heavily impact on your revenue.
- Always follow up every no-show with a phone call. This lets the client know that her no-show was noticed by the salon. If she hears nothing from you she'll assume that it was no big deal to you and is more likely to re-offend in the future. The call shouldn't be nasty or aggressive, but a way to let the client know you noticed her failure to turn up.
- When you introduce a no-show penalty, be aware of the fact that there's a very good chance you may lose the client if she thinks she may need to pay for her missed service. This is not always a bad thing, especially if the client is actually no-showing regularly.
- Train your team members how to talk to their clients about appointment availability in your salon or spa. People always value what they have to fight to get.

It's important to always give the impression to clients that you are a much sought after salon or spa with limited appointment times available. When this happens, their appointments with you become more valuable and they're much less likely to forget to attend.



why airless packaging and what's it going to do for me?

Many brands are clamoring to include airless packaging into their skin care brands without understanding exactly what it is. The reason this technology is popular is because, in the right application, the functionality and innovation is superior. However, the finicky details about the technology itself remain a mystery to many as it is not the solution to every dispensing application.

What is airless packaging?

A traditional lotion dispensing pump or spray product is pressurized or atomized. Whereas airless packaging uses a certain level of difference in the environmental pressure, which creates a vacuum. This is responsible for pushing out the product from a valve that opens the reservoir of the product itself. The packaging and dispensing world is becoming reliant on this technology due to the functionality of it.

Consumers are elated because they know they will be able to get out the last drop of product. It is somewhat different from aerosol packaging which needs a propellant to work. They work seamlessly by creating an equilibrium between the natural pressure of the external environment and the one which is created internally in the product reservoir by the lack of air. As a result, the product comes out easily as it is eager to seek free space outside the container.

Types of airless packaging and their functions

There are 2 types of airless packaging:
1 The first one is designed around the concept of a medical syringe in that an interior plunger that creates an airtight seal internally. When it is activated, the product is pushed up from the bottom until it is emptied. Keep in mind that the



by Steve Welsh

syringe works according to the physical energy of the person, whose potential energy becomes kinetic energy during activation.

However, the airless packaging differs slightly. The pressure applied on the outside is not amplified and no matter how much pressure is applied to the container valve, a conduit is opened from which the product can escape the interior reservoir which houses the product. The product first enters the small orifice valve and stays in the barrel beneath the cap until the plunger is pushed and allows the product to move outside. Airless packaging is a conservative system

that needs less energy to activate due to the vacuum created inside the product reservoir.

2 The second type of airless packaging differs in that it has a hard container with a flexible bag inside that is filled with the product. When the product comes outside, the air doesn't come in and doesn't push the barrel up. Instead, the bag shrinks in size and collapses on itself due to the added pressure. It's more like a toothpaste tube, without the whole squeezing thing. The bag can collapse and shrink due to the air evacuation, pressure actuation, and equilibrium of pressure.

Why do we need airless packaging when we have a pump and a bottle?

Depending on the application, it could be that you need to continue with a pump and bottle, especially if the viscosity is high, therefore airless packaging may not be the correct application. This type of packaging excels with serums and gels, as in most of these applications you are looking to control the delivery and dosage, and not want excessive oxygen to contact so that preservatives in your formulation can be minimized. In this case, an airless application is generally easier to use and user-friendly. A traditional pump and bottle pulls the product from the bottom of the package to the top through the dip tube and requires the bottle to be straight or slightly tipped to ensure the base of the dip tube is submerged in the formulation. Whereas the airless package empties from the top, dispensing even in an inverted position.

There are airless and there is airless

We have meetings regularly and some prospective clients will tell me that Airless didn't work for them, it could very well be that the application wasn't right for the type of product they were packaging. However usually it is a case that the buyer purchased an airless system without looking deeper into the solution.

As we said earlier the airless system is predicated on a vacuum being achieved, if there is air bubbles this will cause a problem for many systems. Over the years, we have done extensive research as to the best type of airless system of varying solutions and some small packaging adjustments can suddenly make the package work with your solution. Boosting consumer satisfaction and at the end of the day brand loyalty and sales.

With so many options, sizes and styles that function this way. We carry stock and sell many more from airless tubes, to recyclable bottles and off the shelf solutions.

As always, don't hesitate to reach out with any questions or if you would like a free appraisal of your packaging just send me an email to steve@weltradepackaging.com.au

STEVE WELSH is a cosmetic packaging specialist with over 20 years experience across all mediums of packaging. As the director of Weltrade Packaging, Steve leads a team of designers, technicians, printers and supply chain professionals. To ensure the best exposure of your beauty, skincare or cosmetics brand. Steve's philosophy is to design your packaging correctly, right from the start, so you can elevate your brand and move more product. Steve works closely with leaders in the cosmetic industry to ensure that your packaging consistently stands out on the shelves within this highly competitive market.



weltrade
Packaging Solutions

FOR ALL YOUR COSMETIC PACKAGING

PET JARS

- Packaging Design
- 20yrs Experience

BOTTLES

- Bespoke Packaging
- 5 Million Packages Sold 2016

TUBES

- Custom Colours
- Full Decoration

weltradepackaging.com.au call 07 5597 0102

Demand for “Free-From” surfactants



In recent years, the personal care market has seen a growing demand for specialty surfactants that contain milder and gentler ingredients, yet have the same properties as materials that contain sulphates. Renewable,

biodegradable and “free-from” are all key words being used to highlight the benefits of these natural products.

Companies like RITA Corporation respond to this market demand by consistently adding to their lengthy list of naturally-derived, company branded “Ritafactants” which are sulphate-free, PEG-free, and DEA/MEA-free ingredients. Many of these blends work remarkably well in shampoos, body washes, face washes

and baby care products by utilizing sodium lauroyl lactylate to boost foam, viscosity and improve moisturisation.

For more details, please contact RITA Corporation’s Australian distributor Concept Chemical Corporation on 02 9498 7600.



Producer of Natural Essential Oils

For use in fragrances, flavours, food, aromatherapy, personal care and pharmaceutical applications. Oils meeting local and international standards.



Bontoux Australia Pty Ltd

Sydney, Australia
Contact : Nguyet Nguyen
nguyet.nguyen@bontoux.com
Ph : +61 (0) 2 98239898
Mob : +61 (0) 438 803082

Bontoux Aromatics Trading (SZ) Co., Ltd

Shenzhen, China
Contact : Edward Cheung
bap@bontoux.com
Ph : +86 755 83556903
Mob : +86 13262531889

Bontoux Asia Pacific Limited

Tsim Sha Tsui, Hong Kong
Contact : Max Ng
bap@bontoux.com
Ph : +852 23011592
Mob : +852 94396021



Next Generation Surfactant

Ritafactant SFE is an all-in-one blend that can be used in a wide range of formulas. These blends work remarkably well in shampoos, body washes, face washes and baby care products, by utilising Sodium Lauroyl Lactylate to boost foam, viscosity and improve moisturisation. This material is exceptional because of its ability as a Lactylate to penetrate skin easily, providing residual moisturisation, extended fragrance release and enhanced delivery of actives. Ritafactant SFE is the hallmark of extensive testing with an emphasis on performance driven, Lactylate boosted prototypes that are cost competitive to their

sulphated counterparts. This new material is a low-cost blend composed of primary and secondary surfactants that are sulphate free, sulfonate free and DEA/MEA free. Ritafactant SFE can easily be added to the water-phase of cold process production for cosmetic, personal care and even household market segments. The work has already been done! Always looking to expand their portfolio of Sulphate-free and Lactylated blends, Rita Corporation are proud to have Concept Chemical Corporation represent their latest development Ritafactant SFE to the local Australian market.



Concept Chemical Corporation is ready to support you, along with industry expertise and partnership with RITA Corporation to help meet your supply and new product research needs.

Contact us on (02) 9498 7600 or sales@conceptchemical.com.au to find out more.

The changing face of male cosmetic surgery in Australia

- Most men think it's OK to have treatments to address premature ageing
- More than one third worried about looking old
- Most popular treatments include wrinkle treatment
- Working longer and competing in job interviews a driving factor, says CPCA

Aussie blokes' attitudes to non-surgical cosmetic treatments to combat premature ageing have changed significantly in recent years. The latest survey¹ conducted by the Cosmetic Physicians College of Australasia (CPCA), indicates 75 per cent of Australian men now think it's acceptable to have anti-ageing treatments to address premature ageing. The CPCA's 2014 survey found less than 50 per cent of male respondents thought addressing premature ageing through cosmetic intervention was acceptable.

More than one third of Aussie men are worried about looking old, with the top ageing concerns focusing on thinning hair, posture and wrinkles.

The CPCA survey, which is now in its ninth year, found the most popular procedures in Australia for men include wrinkle treatment, non-surgical fat reduction and laser hair removal.

"Although not a common conversation topic, men are recognising some of the signs of facial ageing and realising that they can do something to increase self-confidence. This increased confidence often filters into many aspects of working life," spokesperson for the CPCA, Dr Catherine Porter said.

The survey also found that of those men who had a cosmetic treatment, one quarter experienced some form of treatment in the last six months.

"We think one factor influencing men's attitudes is the realisation that many will need to remain in the workplace longer than they previously thought and they want to project



a more youthful appearance, particularly if they are in the job market and think they'll have to compete with younger people," Dr Porter said.

"If you're interested in non-invasive treatments like injectables, you should visit www.cpcanet.au to find a doctor with an interest in non-invasive cosmetic medicine," Dr Porter said.

¹ For further information or to request an interview with a CPCA spokesperson, please contact Res Publica:

Simone Rayner | srayner@respublica.com.au | 02 8297 1512 |

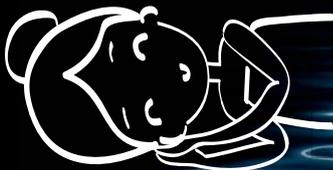
Nightshift Resurfacing Mask



1
CLEANSE



2
APPLY



3
SLEEP



Wake Up RADIANT

Intensive overnight skin booster

- Improves skin texture & clarity
- Boosts skin hydration
- Promotes collagen stimulation
- Increases cellular turnover
- Strengthens skin barrier function

#ultraderm

Ph 1300 660 297 or email info@ultraderm.com.au for product sample

President's Report

by Matthew Martens



So it is with a touch of sadness that I write this as my last President's Report before handing over to the next person after my term finishes at this year's Conference. I would certainly like to thank everyone for their patience over the last 2 years in what has been a pivotal period for the Society to continue a pattern of sustained growth over the coming years. My fellow Councillors and everyone that has had a hand in implementing a number of the changes we have proposed have been extremely supportive and enthusiastic towards creating a more diverse and driven ASCC that will look to provide benefit to all parts of our membership.

There has certainly been some more challenging times along the way but the cohesiveness and enthusiasm that our Council and various committees have shown is testament to the passion that all our volunteers have to ensure ASCC members and the Personal Care industry continues to grow and thrive. One of the most pleasing highlights that I have over the last 2 years has been the introduction of the ASCC Benefactors program and the growth of our base membership from 388 to 453 over the last 2 years. This shows that we are now reaching more people within our industry and encouraging more companies to be involved in the ASCC.

Our Technical Committee continues to work hard in the background updating all of us on the latest hot issues that we need to be aware of. Over the last 2 years we have seen issues such as Polyethylene Beads, Animal Testing and the incoming NICNAS reforms

amongst others are key areas of focus. I also point to the increase in new members of our Technical Committee that more and more members want to contribute in their own small way.

Education has been and always will be the key message for the Society. The creation of the CPD program and more and more hands on Education sessions has been a key driver to improve membership benefits and ensure our members are getting access to the most innovative and interesting educational content possible. Our various Chapter committees do a fantastic job at organising local events and please use these opportunities to continually network and meet people in your local Chapter. We will also continue to look at working closer with affiliated associations such as ACCORD to gain access to other areas of expertise and opportunities for our members.

Publicity is an area we have looked to certainly improve our offering as we look to tap into new opportunities for membership growth. With a newly updated website and an increased presence on Social Media this has allowed us to reach many more potential members than ever before. These initiatives are just starting to pay off and with many more exciting things planned for the next few years the ASCC will continue to evolve and refresh itself to appeal to everyone involved in the industry.

The Annual Conference continues to be our main event for the year. This year Belinda and her team have come up with a number of significant innovations to help attract a diverse range of conference delegates. With newly

created innovation zones and interactive workshops this conference will be one surely not to be missed. The Sunshine Coast will be a fantastic location and I for one am extremely excited as we build up to this year's 49th Annual Conference.

I have thoroughly enjoyed my term as President as I have seen the society make very concerted steps to grow and expand. The ASCC has been a part of my life now for 14 years and I have many people to thank for the support provided to me so far. In particular the following Council members for their patience over the last 2 years I will always be grateful; Robert McPherson, Jenny Brown, Julian Jones, Iman Irhimeh, Henry King, Trish Maharaj, Belinda Carli, Julia Hudson, Helen Pearce and Margaret Smith. Also a special mention must go to the extremely hard work done by Kate Paulett. Kate's work in the background keeps the Society running and without her we would be lost. Without these people and many others dedication and commitment to the ASCC we would not be in the position we are today and this is the lifeblood of the society that we need to continually nurture and encourage. I have given this role 100% and hope that I have lived up to the proud history of past Presidents of the ASCC and can pass on the baton to the next person and allow them to further improve on what we have achieved so far. I firmly believe that the future of the ASCC is a bright outlook indeed.

Matthew Martens MASCC
ASCC President



The new RonaCare® RenouMer – Extraordinary skin rejuvenation

Discover the new RonaCare® RenouMer ocean secret and make use out of this extraordinary spring of youth:

- Direct impact on collagen
- Skin smoothing
- Skin densifying
- Improved skin moisture and elasticity
- Makes use of holistic and nourishing cytoplasm
- Positive impact on algae diversity in Brittany
- Based on the discovery of new ocean sources

Interested?

Make sure to contact the Merck experts

Joanna George

Merck Pty Ltd | Ground Floor, Building 1 | 885 Mountain Highway | Bayswater | VIC 3153 | Australia

Phone: 03 8727 6335 | Mobile: +61 (0)428 855 122 | E-mail: joanna.george@merckgroup.com

www.merckgroup.com



The Ultimate Beauty Survival Kit for Busy Mothers

Lubrizon Skin Essentials presents a new formulation concept developed in accordance with its objective of empowering its customers with products and services that will enable them to accelerate and enhance their creativity. Meant to serve as a source of inspiration for its clients, this new concept comprehends an assortment of complete formulations for busy mothers, who have little time to take care of themselves.

Nowadays working mothers have to balance their professional career with being a mother and still find some time for their personal life. Hard workers, time balancers, experts in organization and harmony, they are also interested in looking good.

Hectic schedules, multitasking, stress and lack of sleep can negatively influence a woman's skin so it needs some special care during this busy period of life. Since going to a spa or a beauty salon does not fit into a mother's busy schedule, Lubrizon brings these services to her home with formulations that provide the best combination of powerful and effective ingredients to care for her skin in the most efficient way.

WOW MOM: Utterly a mother. Utterly a woman

Traditionally faced with a question *Which comes first, being a mother or being a woman?*, today's busy mothers choose

to be both. 100% mother and 100% woman. Lubrizon assists in making this possible with its latest **WOW MOM** beauty survival kit that includes four skin care products offering active mothers the opportunity to indulge and care for their skin, to have that special moment for themselves every day. Each formulation brings together the sensorial benefits of a surprising texture, an appealing visual and evocative fragrance with the claimed performance of high-tech active ingredients substantiated by science.

Getting ready for another busy day is easier with a **Rinse off Moisturizing Radiant Facial Serum** that applied in the morning during or after the shower helps to recover from lack of sleep. This serum visibly brightens and unifies the complexion. At the same time, it protects the skin from photoaging and enhances skin's softness and suppleness after rinse-off.

Following with a **Super Protective Face Mousse SPF 10** will allow the skin to survive the long day facing stress and environmental pollution. This ultra-whipped texture mousse, in addition to minimizing the appearance of wrinkles, provides a barrier between the skin and the harmful ambient substances and enhances its antioxidative defenses offering a complete outdoor protection.

At the end of the day, **Reviving**

Evening Facial Gel-Cream is the ally to recover from a long day and refuel the skin. This formulation offers a rested and younger look by visibly reshaping the face contour and replenishing the skin to help it to recover its lost volume. In addition, its unique translucent gel-cream texture breaks onto the skin, releasing water and refreshing the skin to re-energize it.

Finally, maintaining a toned and defined figure in spite of having little time to go to the gym is possible with a **Cold Firming Body Night Cream**. Applied before sleep, this night cream helps maximize the workout results by mimicking the effect of endurance exercise to redefine areas sensitive to sagging due to aging or insufficient physical activity. Stored at -20°C , this bouncy cream with memory shape effect offers an initial cool sensation and allows long playtime to massage the body leaving the skin soft and supple.

As Lubrizon Skin Essentials, Lubrizon and Lipotec offer ample expertise in skin care that combined makes it possible to deliver unique, innovative and trendy solutions to the market.

For more information please contact Robert McPherson, Account Manager for Australia and New Zeland, at RMcPherson@Lipotec.com or Tel: +61 (02) 9741 5237.

ASCC 2017 CONFERENCE VISIT US ON STAND 6 & 7

SENSORY WORKSHOP - 1
WED 3RD MAY 10.15 - 11.15

Making Sense of Scents: How to
Choose the Right Fragrance for your
Personal Care or Home
Care Formulation

Eva Nagy - Muskvale Flavours and Fragrances, IMCD

Go Wild!



DIAMOND SPONSOR



IMCD

Value through expertise

FORMULATION WORKSHOP - 1
WED 3RD MAY 11.30 - 12.30

Touch the Future
in the
Ultimate Pressure Test

Dr. Valerio Vergani - IMCD Italy

PLATFORM PRESENTATION
SESSION 2B (ROOM 2)
WED 3RD MAY 3.30 - 4.00

Native Wisdom -
First Active Ingredient to
Correct Solar Elastosis

Dr. Emily Shao - BASF

PLATFORM PRESENTATION
SESSION 3A (ROOM 1)
THU 4TH MAY 8.30 - 9.00

Curcuminoids as Vitamin D like
Compounds that Effectively Prevent
UV Induced DNA Damage in
Human Skin after Sunburn

Bianca McCarthy - University of Sydney

PLATFORM PRESENTATION
SESSION 4A (ROOM 1)
THU 4TH MAY 3.30 - 4.00

Beyond Pollution Protection
to
Complete Urban Defence

Tasha Spicer - IMCD Australia

PLATFORM PRESENTATION
SESSION 7B (ROOM 2)
FRI 5TH MAY 4.00 - 4.30

Green Glutamate Surfactants with
Outstanding Mildness, Foam
and Thickening Power

Dr. Yana Bykov - Schill+Seilacher GmbH

All Colour Supplies —

serving the colour industry for over 25 years

All Colour Supplies is a proudly, Australian owned and operated company serving the colour industry for over 25 years. Our core business is Food, Cosmetic and Pharmaceutical, we carry a large range of Dyes, Pigments, Lakes and Pearlescents for most industries in stock. We represent Neelikon, who manufacture all organic Lakes & inorganic pigments for Food, Cosmetic and Pharmaceutical markets and distribute to over 100 countries worldwide. They have ISO 9001 : 2008, FSSC 22000 (ISO22000 + PAS220) & GMP, all colours are Halal, Kosher ISI & Non-GMO Certified, as well as REACH compliant. Our focus is on delivering superior customer service, at a competitive price.

I would be glad to supply samples and technical information for your evaluation, we would welcome the opportunity to be part of your supply

chain. While we are, Sydney based, we supply more colour interstate than NSW, and regularly visit all customers.

We have recently released our new range of DispersAqua® and DispersOil® colours, these are a pre-dispersed range of Food and Cosmetic grades lakes and pigments dispersed (using a bead mill) in a water based (Glycerine) or oil based (CCTG) carrier with approx. 50% pigment loading, ensuring you attain maximum colour strength, with none of the production hassles of high-shear mixing or spotting to achieve an optimum result. By using FD&C lakes approved by the FDA we ensure you are compliant for most markets including Australia, USA and EU. We also produce a Natural Colour Range in both mediums using Turmeric (Yellow) Indigo (Blue) and Carmine (Red), as well as a range of Iron Oxides with one of the lowest heavy metals content



in the world. Both DispersAqua® and DispersOil® colours can be used across a wide range of products from Ice Cream, and yogurts through to lipsticks, lotions, soap, and wax products.

Our modern laboratory can assist with R&D, formulating, and testing, please contact our staff for assistance.

All Colour Supplies Pty Ltd

Telephone: 1300 138 203

Email: info@allcoloursupplies.com.au

Web: www.allcoloursupplies.com.au

Unit 18

244-254 Horsley Road

Milperra NSW 2214



DispersOil® and DispersAqua®

The new face of Colour

Our new range of highly concentrated dispersions (lakes & pigments) makes colouring your formulation easy. No more spotting or milling colours at high speed. Simply add and stir to achieve the desired colour every time with absolute consistency and superior light fastness compared to dyes.

DispersOil® is your ideal choice for Lipstick, Waxes, and any oil based products. **DispersAqua®** is perfect for lotions and creams, Make-up, tattooing inks, and all water based cosmetic products.

Call us on: 1300 138 203
Email: sales@allcoloursupplies.com.au
Web: allcoloursupplies.com.au

Proudly,
Australian owned &
operated since 1989





promising results for scar treatments

Wound healing is an ‘imperfect’ process, inevitably leading to scar formation. The resulting scars have different characteristics to normal skin, ranging from fine line asymptomatic scars to problematic scarring including hypertrophic and keloid scars. Scars can appear as a different colour to the surrounding skin including red scars and scars that are darker than the rest of the skin. They can be flat, stretched, depressed or raised, manifesting a range of symptoms including inflammation, erythema, dryness and pruritus, which can result in significant psychosocial impact on patients and their quality of life. Scars can result from dermal injury due to disease and trauma and some common examples include burn scars, acne scars and surgical scars.

Subjective assessment

To assess the evolution of scars over time, a number of subjective rating scales have been introduced into clinical practice. These scales can be obtained free of charge or for a small fee and require minimal training to utilise. For example, the Patient and Observer Scar Assessment Scale (POSAS) was developed in 2002 for the assessment of all different types of scar tissue. The POSAS enables a structured clinical evaluation of scar quality. Assessments are conducted by both patient and clinician independently.

The scale contains questions applying to pain, itching, pigmentation and vascularity, pliability, thickness and relief. Each of the questions has a



by Emanuela Elia

10–point score, with ‘10’ indicating the worst imaginable scar or sensation. The lowest score is ‘1’, and corresponds to the situation of normal skin (normal pigmentation, no itching etc.). All questions add up to the ‘Total Score’

EMANUELA ELIA is the Director of Ozderm, which specialises in *in vivo* testing and clinical trials for cosmetic and personal care products. Emanuela Elia has a law degree from Rome and a Master of International Business from the University of Sydney. She had collaborated with Australia’s longest serving Contract Research Organisation Datapharm for a few years before setting up a cosmetic and personal care products testing facility in 2009. Emanuela is enthusiastic about improving the quality of cosmetic and personal care products’ research in Australia through science.

of the Patient Scale and Observer Scale respectively. Besides the main questions, patient and observer are asked to provide an 'Overall Opinion' concerning scar quality, which is scored separately.

However, scar scales like POSAS are considered to be subjective and the resulting scores can vary between different assessors (inter-assessor variation), different scar severities and age of the scar. Some studies have suggested that more than one assessor is required in order to produce reliable ratings and then taking the average. The POSAS attempts to improve the method of rating scars by including the patients' perspective; however, patients' perception and subjective evaluation of their scars have been shown to be influenced by depressive symptoms. Moreover, the physical characteristics of scars make rating quite difficult. For example scars are rarely homogenous in both colour and texture, which makes estimation of mean values difficult and inaccurate for a human observer.

To monitor changes in scar quality over time and determine the effectiveness of scar treatments it is therefore necessary to utilise additional objective assessment tools which are standardised, quantifiable, reproducible and validated.

Objective assessments

There are several objective measures that relate to scar severity including:

Colour: erythema and pigmentation contribute significantly to the appearance of a scar.

Dimensions: including the surface area, thickness and volume.

Texture: surface texture or scar roughness has a significant effect on the patient's and observer's opinion of the scar.

Biomechanical properties: pliability and elasticity. Stiffness and hardening of scars are due to increased collagen synthesis and lack of elastin in the dermal layer and can lead to impairment of skin function, especially when the scar is located around joints.

Other skin parameter: including transepidermal

dermal water loss and moisture content.

Tissue microstructure: new non-invasive in vivo imaging techniques are able to analyse the morphology of the scar, providing measurements previously only possible by histopathological analysis of biopsy samples.

Scars following injury or surgery are often treated with self-medication independently of clinician care. Patients only seek diagnosis and treatment, should signs and symptoms worsen, such as in the case of hypertrophic and keloid scarring, which may require a more appropriate intervention. Several prescription and over-the-counter topical remedies are available on the market, which claim to improve the appearance of scars and accelerate the rate of wound healing. Topical treatments have the advantage of constant skin adhesion and localised product delivery.

Systematic review for scar treatment options

Several large systematic reviews have been published, with regards to treatments available for various types of scars. The main conclusion drawn from these reviews was that while several options are available for treatment of a range of different scar types, there were no large scale studies with prolonged follow-up periods to draw firm conclusions regarding long-term efficacy. Other common problems were poor randomisation and blinding, the range of different scar assessment methodologies used and varied outcome measures reported. It is difficult to randomise a trial based on wound healing because of several variables to take into account. Many factors such as anatomical location, patient demographics and medical history, surgical operation performed or the age and type of scar, the injury that caused it and the lack of controls, make it difficult to standardise between trials. Despite the volume of research into treatments for skin scarring and some positive evidence presented, we don't know how many trials showing negative results are not published and therefore are not available for review.

Our findings in a recent study

In an independent study we have recently completed on scars treated with a topical cosmetic preparation interesting results on the efficacy of the product have been obtained. This open label study aimed at comparing scar appearance after 4 weeks and 8 weeks of treatment compared to baseline. A combination of objective and subjective assessments were used, including digital photographs, image analysis of silicon replica, a general questionnaire regarding sensory, quality and safety of the product and the POSAS. In this study statistically significant reductions compared to baseline were found in the scar total area, length, and roughness at each time point. This was evident in some of the digital photos taken and the POSAS (patient assessment only). Better results were reported in younger scars as opposed to older scars. Although this study did not have a control, it indicated some promising results with regards to use of topical preparation for scar improvement.

Scars are a result of the natural skin healing process. There is some evidence suggesting that topical preparations may assist the natural process by helping the scar improving faster and better. More clinical trial data is needed to increase the level of evidence in support of topical treatments in comparison with other approaches. The adoption of objective assessments and appropriate study design including a control, randomisation and sample size calculation, will improve conduct of studies that may confirm the potential of topical treatment to improve the appearance of scars.

References

- 1 <https://www.dermcoll.edu.au/atoz/scar-treatments/>
- 2 <http://www.bodyandsoul.com.au/beauty/body/reduce-the-appearance-of-scars/news-story/1bba2e5fc889b4813e114ad407fabfc>
- 3 G. P. Sidgwick, D. McGeorge, and A. Bayat, A comprehensive evidence-based review on the role of topicals and dressings in the management of skin scarring, Archives of Dermatological Research 2015; 307(6): 461-477.
- 4 Kwang Chear Lee, Janine Dretzke, [...], and Naiem Moiemien, A systematic review of objective burn scar measurements, Burns Trauma. 2016; 4: 14



Make a date and mark your calendars

EVENTS 2017

ASCC Annual Conference

3-5 May

Novotel Twin Waters Resort
Sunshine Coast Queensland

Asian Societies of Cosmetic Scientists Conference

15-17 May 2017

Kerman Iran

14th International Sun Protection Conference

6-7 June 2017

30 Euston Square London UK

In Cosmetics Korea

20-22 June 2017

Seoul

NZSCC Annual Conference

26-28 July 2017

Rippon Vineyard, Wanata NZ

In Cosmetics Latin America

20-21 September 2017

Sao Paulo

In Cosmetics North America

11-12 October 2017

New York City

IFSCC Conference

23-26 October 2017

Seoul Korea

In Cosmetics Formulation Summit

25-26 October 2017

London UK

In Cosmetics Asia

31 Oct – 2 November 2017

Bangkok

Cosmoprof Asia

14 – 17 November 2017

Hong Kong



CLINICAL TRIALS FOR COSMETICS
AND PERSONAL CARE PRODUCTS

Specialised in claims support studies:

EFFICACY

Expert grading & Clinical photography

Bio-instrumental measurements

Consumer self-assessment

SAFETY

Short term irritation testing

Cumulative irritation testing

Sensitisation testing (R.I.P.T)

All Tests Conducted in Australia

Clients may be eligible for the 43.5% R&D Tax Incentive

trials@ozderm.com.au

www.ozderm.com.au

Ph: +61 (0)2 9719 3852

Fax: +61 (0)2 9719 2811

Suite 1, 56-56A Thompson St. Drummoyne NSW 2047



hyperhidrosis – excessive sweating

by Tina Aspres

Sweating (also referred to as perspiration) is an important, natural body function. It is the body's physiological response to regulate body temperature and maintain homeostasis. It prevents the body from overheating when the temperature is high or during periods of overheating, for example, during physical activity or exertion, fever, pain, or during times of stressful or fearful situations.

Body temperature is, on average, around 36.6 degrees Celsius. If body temperature rises above that temperature by too much, the body via the autonomic nervous system will stimulate the sweat glands of the skin to produce sweat which results in a cooling effect on the body as it evaporates from the surface of the skin

Some people however sweat more than is necessary, when the body doesn't need cooling – and this condition is a medical condition called hyperhidrosis (excessive sweating). Sufferers of hyperhidrosis may sweat profusely from one or two areas of the body – palms, feet, axillae, or head – whilst the rest of the body remains dry. This excessive sweating can cause not only physical discomfort, but also severe embarrassment, low self-esteem and

depression.

There are two types of sweat glands – eccrine sweat glands which are found all over the body and produce a light often odourless sweat and the apocrine sweat glands, which are found in hair follicles in the scalp, axillae and groin and are responsible for producing sweat that when combined with surface bacteria, has a distinct, often offensive odour (bromhidrosis). Sweat is a fluid is made up predominantly of water (99%) that contains a combination of sodium chloride (salt) and lipids.

Everyone is born with a certain number of sweat glands – anywhere from 2 million to 5 million, and these glands become active when the body temperature rises. The highest concentration of sweat glands occurs on the feet, while the least concentrated area of sweat glands is on the back. Females have more sweat glands than males but men's sweat glands are more active, hence the reason why men sweat more than women.

Hyperhidrosis is classified as primary or secondary. Excessive sweating without any underlying medical cause is called primary hyperhidrosis. Primary



hyperhidrosis is usually bilateral and localized to certain areas such as the palms, soles, axillae or face. Primary hyperhidrosis affects up to 3% of the population and almost always appears in childhood or early adolescence and may persist as a lifelong problem, often associated with a family history of hyperhidrosis. Some sufferers notice an improvement with age. The sweat glands are overactive and cause more sweat than is required to be produced. Triggers include hot climatic conditions, exercise, anxiety, fever, and hot and spicy foods. Interestingly sweating decreases at night and during sleep.

Sweating due to an underlying

medical condition is referred to as secondary hyperhidrosis. It is less common than primary hyperhidrosis and tends to be more unilateral, asymmetrical and generalised and is more likely to affect adults. Excessive sweating, unlike primary hyperhidrosis, can occur at night and during sleep. Medical conditions that may cause an increase in sweating include diabetes, hyperthyroidism, cardiovascular disease, tumour, menopause, head trauma and obesity. Medications may result in secondary hyperhidrosis.

Hyperhidrosis adversely impacts one's quality of life. Axillary (underarm) hyperhidrosis affects the armpits. Clothing becomes excessively wet, with obvious wet patches on clothing, often requiring clothing to be changed several times a day. The wet conditions can often cause chafing, irritant dermatitis and even infection. Palmar (hand) hyperhidrosis causes slippery hands leading to avoidance of person to person contact such as shaking hands, difficulty turning a door knob, using a computer to work or writing. Plantar hyperhidrosis affects the soles of the feet and is often characterised by an unpleasant odour. Footwear is often wet, skin may be macerated and feet are prone to fungal infections.

Hyperhidrosis is usually diagnosed clinically. Apart from visual

examination, the precise site of localised hyperhidrosis e.g. of the hands or underarms can be identified using the iodine/starch sweat test. This involves applying Iodine (orange) onto the skin and allowing it to dry. Starch (white) is then dusted onto the iodine. Where sweating is stimulated, there is a change in colour to a dark blue/purple almost black colour.

To determine any underlying cause, screening tests may be required in secondary generalised hyperhidrosis depending on other clinical features that are found during examination by a Medical Practitioner.

Treating hyperhidrosis depends on the type of hyperhidrosis and where it is present.

Treatment often commences with general measures which include wearing loose fitting non-synthetic, sweat absorbing clothing, regularly changing clothing and footwear when it becomes wet, cotton blend socks to absorb moisture, socks with silver (which reduce infection and may improve foot odour), absorbent inner soles in shoes, using a soap free cleansers, using a talc or corn starch dusting powder and using an antiperspirant.

Topical antiperspirants containing 10-25 % aluminium salts are effective and help reduce sweating. Aluminium zirconium salts tend to be more effective

than aluminium chloride. They are usually applied to dry skin at night before bedtime and washed off in the morning. Occasionally they may cause irritation and require discontinuation. Deodorants are considered to be ineffective in hyperhidrosis as they are merely fragrances that are used to help mask an unpleasant odour but will not have any effect on decreasing sweat production.

Avoiding certain foods that are common triggers such as hot spices, curry, alcohol, caffeine and monosodium glutamate (MSG) may also help.

Medical opinion and intervention may be sought when the problem is severe and distressing and antiperspirants and the above measures fail to provide any acceptable, adequate response.

Iontophoresis is a form of home treatment for hand, foot and axillary hyperhidrosis. Units are available for purchase and may be mains or battery operated. The way these units work is the affected area is immersed in water in a shallow pan and a gentle, low voltage electric current is passed through the water across the surface of the skin. Treatment can last for 10 to 40 minutes and is repeated on a daily basis initially and then as the condition improves, it is reduced to two to three times a week to once a month as required based on response. A chemical – glycopyrrolate – may also be added to the water – which increases the effectiveness of the treatment. This treatment is time consuming and may also be irritating and a cause of discomfort to some. Treatment however, is long-term treatment – not a cure – and may not be practical for all.

Botulinum toxin is an approved and effective treatment for axillary hyperhidrosis. It successfully reduces and may even stop sweat production for 3 to 6 months – but does not cure the problem. Injections need to be repeated at regular intervals to ensure the problem is controlled. There are currently clinical trials being undertaken investigating the topical application of Botulinum toxin gel for the condition.

Medical practitioners may also prescribe



Fig 1: Sweat test with iodine and starch - right palm treated with iontophoresis



Fig 2: Iontophoresis machine

oral medications that temporarily prevent sweating but will affect the entire body e.g. anticholinergic drugs, beta-blockers, calcium channel blockers and anxiolytic drugs to help with the problem. These medications are not

side effect free and often will cause dry mouth and occasionally other undesirable side effects such as blurred vision, dizziness, constipation and palpitations as well as potentially interact with other medications someone may be taking.

Devices are also being used in the treatment of hyperhidrosis, but are limited to treating the armpits only. The devices emit electromagnetic energy or ultrasound energy that destroys the sweat glands in one or two treatments. The treatment is painful and local anaesthetic is required. It is believed that the treatment destroys the axillary sweat glands permanently but as this is a new treatment option, the long-term results or side effects are not fully known.

As a last resort, surgical removal of axillary sweat glands or sympathectomy (to destroy the nerve impulses to sweat glands) may be discussed with a Medical Practitioner if the above treatments fail.

Whilst various treatment options are available for hyperhidrosis, there is no one size fits all solution. Careful assessment to exclude underlying causes, appropriate skin care advice, psychological support and a sensible algorithmic treatment approach will maximise each individual's treatment results.

COME SEE US FOR A WILD TIME

CONCEPTS | INNOVATION | TECHNOLOGY



Ingredients Plus strives to be the best supplier of specialty ingredients to the **Beauty and Health** markets in the region.
Contact us at sales@ingredientsplus.com.au

ASCC CONFERENCE
SUNSHINE COAST
3-5 MAY 2017

BOOTH 4-5



Don't just say it, **PROVE** it!

AMA offers precise clinical & visual evidence to support your claims no matter where your product is applied.



Makeup evaluation & efficacy studies.
Full service, customized clinical support.



Test
Substantiate
Market



www.amalabs.com • +1.845.634.4330

LEARN MORE

FDA Registered
ISO 9001 Certified
GCP/GLP Compliant



You're welcome to *Go Wild* and explore *Science Without Limits!*

Welcome to the 49th Australian Society of Cosmetic Chemists annual conference, where we truly hope you GO WILD!

This event has been designed to inspire innovation and creativity with both new and exciting materials as well as materials of the past in new and exciting ways to create truly exceptional, effective and new age products!

Starting with our exciting conference program, you'll hear from:

- Key note speaker, Mintel, the world's leading market intelligence agency. They'll be highlighting those innovations that were truly different and incredibly successful so you can see how Going Wild has worked in the past; with some inspirations on what can be done to suit future trends!
- Technical experts on the latest raw material innovations, launches and

industry research for Formulators, Manufacturers, Suppliers and Allied Scientists.

- Experts on various marketing-focused topics with a program specifically designed for Brand Owners, Suppliers and Chemists wanting up-to-date trends and marketing information from around the world.

And don't forget our exciting zones at this year's conference:

- Discover... the innovation displays: an informative area where you can discover the latest products and new launches. Indulge your creative side for new marketing concepts and products inspired by the latest innovation and technology in new ingredients.
- Feel... the sensory workshops are interactive presentations where you'll have the opportunity to see, touch and

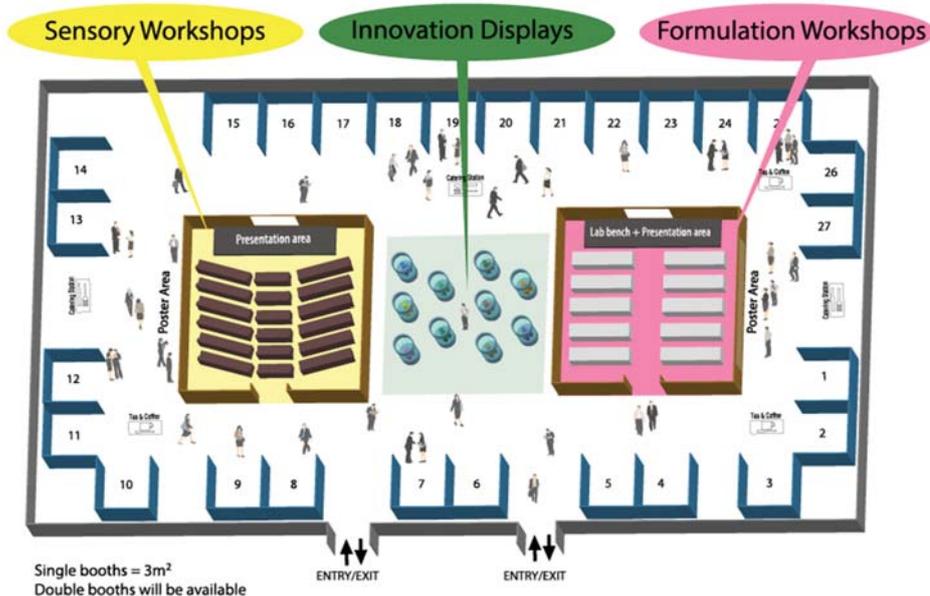


smell formulations and textures. Test a variety of finished products with varying sensory attributes to feel the array of what is possible in cosmetic formulations.

- Experience... with the formulation workshops! Come and learn how to work with new materials and create new textures and novel products. Demonstrations will be shown by our experts with an opportunity to try finished samples for yourself.

Make sure you also take part in our fantastic social program where we're promising plenty of exciting and different entertainment along with multiple networking opportunities in the beautiful Sunshine Coast.

So, GO WILD and take Science Beyond Limits at this year's event!
Belinda Carli and the 2017 Conference Organising Committee.





Australian Society of Cosmetic Chemists Conference 2017

Go Wild! Science Without Limits



ASCC 2017 PRELIMINARY SCIENTIFIC PROGRAM

WEDNESDAY, MAY 3rd

WELCOME & KEYNOTE ADDRESS 9.00 – 10.00

Panoramic Beautyscape – 4 key trends to leading beauty innovations – *Sharon Kwek, Mintel*

SENSORY WORKSHOP 1 – 10.15-11.15

Making Sense of Scents: How to Choose the Right Fragrance for Your Personal Care or Home Care Formulation – *Eve Nagy – Muskvale Flavours and Fragrances*

FORMULATION WORKSHOP 1 – 11.30-12.30

Touch The Future In The Ultimate Pressure Test – *Valerio Vergani – Grant Industries*

SENSORY WORKSHOP 2 – 13.00-14.00

Amazing Product Textures for that Wow Factor – *Belinda Carli – IPCS*

PLATFORM PRESENTATIONS – 14.15-15.15

SESSION 1A: Room one

Hydrolyzed Jojoba Esters: A Plant- Derived Multifunctional Emollient and its Added Functionalities within Skin and Sun Care Products – *Tiffany Oliphant – Floratech*

Western Australian Sandalwood Seed Oil: A novel natural cosmetic ingredient – *Dhanushka Hettiarachichi Wescorp*

SESSION 1B: Room two

Bringing the Innovation Beauty Care Trends from Oriental to the Globe – *Pornsak Raopattananon – Dow Corning*

Who owns your formula? Going wild using products without legal limit – *Carol Burnton – FPA Patent Attorneys*

PLATFORM PRESENTATIONS – 15.30-16.00

SESSION 2A: Room one

An innovative approach for performant & sustainable cosmetic oily actives: the oléo-éco-extraction – *Philip Jacobs – The Hallstar Company*

SESSION 2B: Room two

Native wisdom – First active ingredient to correct solar elastosis – *Emily Shao – BASF*

THURSDAY, MAY 4th

PLATFORM PRESENTATIONS – 8.30-10.00

SESSION 3A: Room one

Curcuminoids as Vit. D like compounds that effectively prevent UV induced DNA damage in human skin after sunburn – Bianca McCarthy – University of Sydney

Clinically Visible Improvements of Photodamaged Skin with Topical Vitamin C in Anhydrous Vehicle – Dr Shiva Farabi – Ultraceuticals

Holding back the years through cell reprogramming – Robert McPherson – Lipotec

SESSION 3B: Room two

Working with formulators/manufacturers – Gint Sillins – Cullens Patent and Trade Mark Attorneys

Microbial high biotechnology and OMICs, the right scientific fusion for an unlimited source of new active ingredients – Silvia Pastor – Lipotrue

Viscosity Versus Rheology whats the difference and why it matters to the formulation chemist – Robert Houlden – Formulytica

FORMULATION WORKSHOP 2 – 10.15-11.15

MasterChemist: Can you beat the clock to create the Perfect Package – Matthew Martens – Croda

SENSORY WORKSHOP 3 – 11.30-12.30

100% Natural Sensory Sensation-Explosion-Pleasure-Emotional Olfactory Appreciation & Positive Cognitive Acceptation – Yves Andre Dombrowsky and Sigrid Vorwerk – Innovaction Ltd and Kereru Kiwi Cosmetics

DEDICATED INNOVATION ZONE TIME

FORMULATION WORKSHOP 3 – 13.45-14.45

Delicious Textures – Wild Australia – James Seguerria , Yuki Yanagi – Nikko chemicals

PLATFORM PRESENTATIONS – 15.30-17.00

SESSION 4A: Room one

Beyond Pollution Protection To Complete Urban Defence – Tash Spicer – IMCD

An innovative active with global photoprotective properties – Jeanette Padilla – Greentech

Urban Life Dermopurifying Active Ingredient from the Sea – Frederick Santos – Seppic

SESSION 4B: Room two

Exporting Organic Cosmetics – Avoid the mistakes – John Mclean – ACO

A synergistic blend for exceptional antimicrobial efficacy – Timm Zabel – Dr Straetmans

Modifying The Rheology Modifier with Primary Aminoalcohols for a More Stable and Consumer Friendly Product – Kim Long Yeo – ANGUS Chemical Company

DIAMOND SPONSOR



PLATINUM SPONSOR



GOLD SPONSOR



* TRIVIA NIGHT – 18.30 *

FRIDAY, MAY 5th

PLATFORM PRESENTATIONS – 8.30-9.30

SESSION 5A: Room one

New Natural Emollients Deliver Silicone like sensation – *Frederick Santos – Seppic*

Performance and Characterization of Non-ionic Surfactant-Activated Microgels in Soap-based Cleansing – *Gary Yao – Lubrizol*

SESSION 5B: Room two

10-Hydroxystearic Acid – A Bio-derived Lipid to Counteract Photoaging Effects on Human Skin – *Freida David – DSM*

Marketing meets Science. What cosmetic formulators and distributors need to know about claims – *Emanuela Elia – Ozderm*

FORMULATION WORKSHOP 4 – 9.45-10.45

Go Wild with Colour – *Belinda Carli – IPCS*

SENSORY WORKSHOP 4 – 11.00-12.00

CO2 Extracts in Cosmeceutical formulating – *Mark Webb – Aromamedix Pty Ltd*

PLATFORM PRESENTATIONS – 13.00-14.30

SESSION 6A: Room one

The Crazy World Of Beauty, Products and Marketing – *Stacey Fraser – Natures Blueprint*

Exploration of Personal Care market trends – *Robert McPherson – Lubrizol*

The Efficacy of a Novel Lipid Complex Designed to Mimic Skin Surfaces – *Tiffany Oliphant – Floratech*

SESSION 6B: Room two

Delivering optical skin effects through science to achieve real beauty for natural skin imperfections – *Pornsak Raopattananon – Dow Corning*

Performance of Succinoglycan in Cosmetics Formulations – *Jonathan Sy – Solvay*

Acer rubrum bark extract, the new natural and eco-responsible global anti-ageing active from the boreal forest – *Bree Webster – Alban Muller*

PLATFORM PRESENTATIONS – 15.00-16.30

SESSION 7A: Room one

The Next Generation of Anti-Aging: Sulfur-Containing Actives – *Quinn Ryder – Active concepts*

Diving into skin microbiote to develop new generation of skincare products – *Emilie Venera – Givaudan*

InfraRed Light and its Effects on Skin – *Ric Williams – Cosmepeutics International Pty Ltd*

SESSION B: Room two

Hypothesis of Thermal Protection mechanism to protect and restore damaged hair with Silicones – *Pornsak Raopattananon – Dow Corning*

A new rheology solution for cleansing formulations with mild surfactants – *Dr Sharon Qu – Lubrizol*

Green glutamate surfactants with outstanding mildness, foam and thickening power – *Yana Bykov – Schill+Seilacher GmbH*

* MAHATTERS GALA DINNER – 19.00 *

It's a new year, a fresh start and set to be an exciting year ahead! So, what does 2017 hold? This report will take a look at the 3 top trends that you'll see this year... so get started early on your next developments with these trends in mind!

Top Trend 2017 #1: **Customisation**

Consumers want product to suit them. Their lifestyle, their skin, their tone, their look. When it comes to developments in 2017, think about how you can customise, or provide a customisation option, for your consumer. Some customisation ideas you may want to use or expand on include:

Customisable bases with optional actives: provide a base serum, cream or crème-gel to suit your target market needs in a pack with concentrated 'active' serums to add to the base to suite their skin needs at any given moment. For example, skin a bit congested today? Add drops of the 'clearing serum' to the base. Skin feeling dry? Add drops of the 'hydrating serum' to the base. Make sure your base addresses key concerns in general such as anti-pollution but provide active concentrates with easy dispensing units and clear instructions for true customisation and a happy consumer.

Colour: always exciting to play with, colour cosmetics should also be customisable. Provide a multi-colour palette with instructional on-line videos on how to make their lipstick pinks and reds 'hotter' or more 'muted'; or foundations (liquid and/or powder) that can be adjusted to be slightly lighter or darker depending on their skin tone depending on the season.

Three top trends

to look for in 2017

Scent: you'll see some exciting customisation ideas in this area this year – scents that can be modified by the consumer with small additions of concentrates to adapt a base to their daily moods. Nothing conveys a mood or personality quite as well as fragrance so watch this space!

Apps: this year will see an explosion of apps that will enable customers to 'try before they buy' in a virtual reality space, and will be tailored to help self-selection of the best actives, colour and scent. If you want your brand to be noticed this year, get an app!

Top Trend 2017 #2: **Sustainability**

This trend has been growing in recent years and will become a mainstay this year – so you need to start incorporating your sustainability message into your general marketing and company philosophies. Using sustainably sourced materials is a must moving forward; but adding to this message are other environmentally and/or community focussed messages. From greening up your carbon footprint, using materials that 'give back' and even making a point of your recycled packaging,



by Belinda Carli

make sure your marketing provides the sustainability message of your brand as a mainstay from 2017 on.

Top Trend 2017 #3: **Sweat/Wear Proof make-up**

The use of film formers to enable make-up to withstand exercise and be selfie-ready at a moments' notice is really taking off. This trend is especially prevalent in the major growth area of colour cosmetics – Asian trend setting women from 20 right through to 35, a big market to cover so plenty of opportunity for brands with various philosophies and users! They also have the highest social media use and exploration of colour cosmetics so provide fantastic sweat/wear proof make-up to take them from the gym through the day and into the night with interesting YouTube footage (and even an app!) to really capture their attention.

sunscreen highlights

by John Staton

UVAPF *in vitro* SHOULD correlate with UVAPF *in vivo*

ISO 24443 Test Method Rationale

Test methods for measuring Ultra Violet A Protection Factor “UVAPF” *In vitro* have been in use since at least the late 1980s and incorporated in the Australian Sunscreen Standard since 1997¹. Sunscreen practitioners in Germany began the investigation of a potential method for *In vitro* UVAPF in early 2000², resulting in

the publication of DIN 67502³ in 2004. With improvements to *In vitro* methods for measurement for Broad Spectrum performance, the determination of suitable end points and “PASS” values has progressed so that now a quantifiable RATIO, as well as the CRITICAL WAVELENGTH, are both set as determinates, depending on the regulatory requirements of different markets. For most (over 60) countries, *In*

vitro UVAPF is now accepted, provided that the sunscreen passes both Critical Wavelength AND UVAPF Ratio minimum limits.

Incorporating the SPF Value of the Sample

For this test sample example, a formulation with an intended SPF 50 label claim, the *in vivo* SPF (along with the raw *in vitro* absorbance data, the Erythral action spectrum and the PPD action spectrum) is to be used to calculate the UVAPF (UVA Protection Factor). This UVAPF (post exposure) divided by the label SPF needs to be at least 0.333.

In order to satisfy the E.U. or AS/NZS requirement for what is, in effect, the comparative UVAPF performance and, at the same time, maintain the SPF 50 claim, the UVAPF needs to be at least one third i.e. 16.67.

The client nominates an SPF of say 50, but the *In vivo* SPF turns out to be much higher – 87.8.

Based on the originally estimated SPF for this product the UVAPF was only 14.95, which only permits a SPF 40 claim. However, when the accurately measured TRUE SPF was applied, this increased to a SPF50+ label claim.

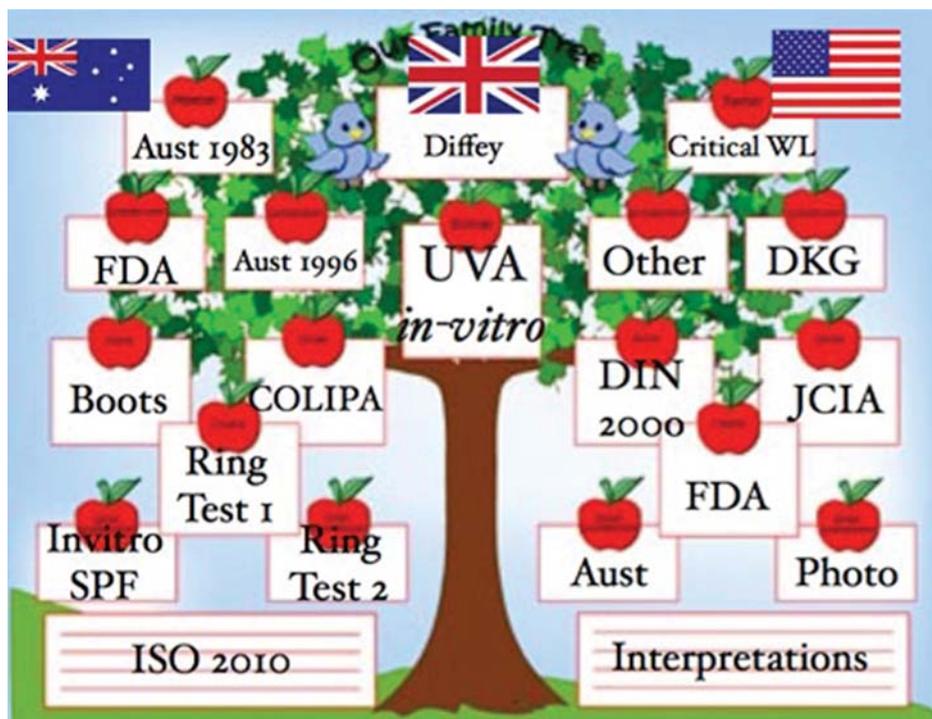


Fig. 1. In vitro UVA Test Method Genealogy.

PEACE OF MIND



PUBLIC LIABILITY & TREATMENT RISK INSURANCE

Protect your business from the devastating effects of an ineffective insurance program. Talk to us about securing your best solution with a leading Australian insurer - and rest easy.

SPECIAL RATES FOR

- BEAUTY THERAPISTS
- BEAUTY STUDIOS
- SPAS
- MAKE-UP ARTISTS
- NAIL TECHNICIANS



INSURANCE MADE EASY

BROKERS SINCE 1992

OBLIGATION-FREE QUOTE

1800 641 260

www.imeinsurance.com.au

Suite 1, 62-64 Main St, Upwey, Victoria 3158
 PO Box 1350, Upwey, Victoria 3158
 Made Easy Financial Group Pty Ltd
 ABN 63095 849 497 AFS Licence No.285920
 Registered Insurance Brokers

SPF Basis	UVAPF (UVA Protection Factor)	UVAPF / Label SPF (>0.333)	Maximum Label Claim AS/NZS 2604:2012)
Estimated at 50	14.95	0.299	40
Estimated at 60	16.97	0.283	50
Estimated at 70	18.89	0.315	50
Actual 87.8 *	22.11	0.369	50+

Fig. 2. Shunt of Label Claim Options based on Results.

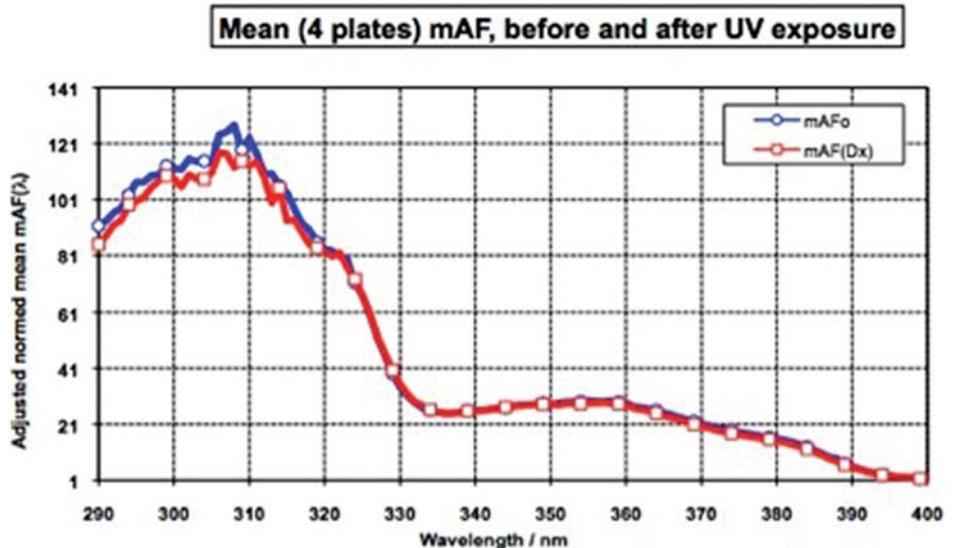


Fig. 3. Spectral Scan of Example. (photostable sunscreen)

Correlation with In vivo SPF

An indication of the *In vitro* vs *in vivo* SPF correlation is the “C” Constant. This value is used to adjust the amplitude of the *in vitro* spectral scan to match the *in vivo* SPF value of the test product. A value of 1.00 indicates 100% correlation and no adjustment is required. A higher C value indicates a lower than specified SPF and vice versa. The ISO 24443 currently permits a “C” Constant range of 0.8 – 1.6. In our experience this range should really be narrowed to 0.8 – 1.2 for emulsion products. Values outside of this range are often an indication of an inaccurate *in vivo* SPF.

Correlation with In Vivo UVAPF (PPD or PA+)

The ISO 24443 UVAPF test is theoretically the *in vitro* version of the ISO 24442 PPD test, whereby the post irradiation UVAPF value should correlate to the PPD value, which is in turn used to categorise the PA rating.

Where it goes wrong

First and most important, is to understand that an accurate UVAPF value cannot be obtained without a true

in vivo SPF. We recommend results from at least three test subjects be obtained before conducting this *in vitro* UVA test.

Secondly, there is variation between how a sunscreen formulation behaves on human skin compared with inanimate PMMA plastic test plates. This difference has been well evidenced. It becomes more difficult to exactly reproduce the result *in vitro* when high SPF is involved, where the film is opaque (such as for foundations) and where the film is reflective – such as for inorganic actives.

Recommended Steps for Obtaining the Right Result

1. Ensure that the applied *in vivo* SPF is an accurate average of at least three test subjects.
2. Ensure the “C” constant falls within the ISO 24443 limits.
3. Ensure that the Spectrophotometer is calibrated (ISO requires this to be done Monthly) .

References

- 1 AS/NZS 2604 Sunscreen products—Evaluation and classification (1997)
- 2 Proposal For In vitro UVA Measurement Beiersdorf AG 2003
- 3 DIN 67502 Characterisation of UVA Protection...

Defy the signs of ageing



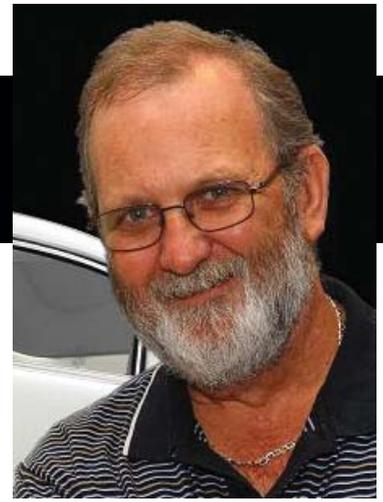
ikonique®
Intelligent Skincare™

www.ikonique.com.au

1300 IKONIQUE
456647

Interested in becoming an accredited ikonique® stockist?
Contact us via our website for details
or email sales@ikonique.com.au





by Ric Williams

Part 34 –

Mythbusting

my opinion of what is fact and what is not

A vast amount of information has been spread around about many raw materials used in the cosmetics industry, most of which is based on a scheme of misinformation, designed by spin doctors in an effort to propose that their product is better than someone else's.

The saying "if it is on the internet or proposed by a "doctor" then it must be right" cannot be further from the truth. Scientific information, subjected to adequate peer review, should be the only evidence accepted, and only then when it is tempered by describing the circumstances under which it is formulated, particularly with respect to levels used, formulation modifications that negate detrimental effects and usage instructions.

There have been many cases where marketers have provided information about the toxicity of ingredients based on the Material Safety Data Sheet about the 100% pure substance; totally ignoring the facts that it is not used at 100%, most times less than 1%, and it is used in a formulation that has been compounded to minimise adverse effects. This misinformation could be construed as "false advertising". I know some information like this has been successfully challenged in a court of law, however good news is not newsworthy and people tend

Ric Williams B.Sc. Dip.Env St.
Cosmepeutics International

This column is intended not only as an education tool for non-technical people or beginners in our industry, but as a forum for those wishing to enlighten all about recent technology advances and new ideas. I hope experienced scientists will also contribute to this ideal and if you wish to do so please email me at: ric@cosmepeutics.net.au and I will publish your comments.

to remember bad news better. This is so sad, in that anyone can make a claim and if found incorrect the "mud has stuck" and it is virtually impossible to rectify bad publicity.

More is not always better

This is a self-evident statement. Many ingredients should not be used at levels above recommendation as they may be irritant at high levels. Emulsifiers, used at high levels, can disrupt the micelles and cause instability in the emulsion.

Skin creams that are developed for cold/wet climates are generally heavy creams and when used in hot climates will feel greasy, "heavy" and leave the skin hot, prickly and "suffocated". See part 6 "Formulations for specific conditions such as age and climate. See Part 6 of "Formulator's Forum" for further explanation.

Hair conditioners when containing too much conditioning additives will leave the hair dull and greasy.

Vitamins work but your body will only use what it can and the remainder is generally excreted. Has anyone taken "MultiVitamin" capsules and wondered why their urine is a bright yellow? This is the excess vitamins, particularly B2, which your body cannot absorb. In fact, Vitamin A can be toxic at high levels (0.50% being the highest I can recommend).

I once was asked by a doctor to develop a 20% Retinol treatment. Horrified at this I tried to explain that this would be irritant, to say the least. When I asked him why, he replied that a doctor down the road had a 10% Retinol treatment and he wanted to be twice as good. How can you answer that without getting angry?

The list goes on.

pH Balance

Skin has a normal pH of about 5.5 – 5.7 so what does “pH balanced” mean.

Chemically, to maintain skin that is pH 5.5 – 5.7 (to maintain “normal balance”) you should not add any product that is either acidic or alkaline, ie use a product with a pH of 7.0 (or neutral pH).

Skin that is oily has a pH of less than 5.5 (down to pH 4.0), due to high levels of skin’s fatty acids with pH of 4 being the pH of pure skin’s fatty acids, and hence requires something with a pH which is slightly alkaline to raise the pH back to 5.5 – 5.7.

Skin that is dry has a pH of more than 5.7 (up to pH 7.0), due to low levels of skin’s fatty acids with pH of 7.0 having no fatty acids, and hence requires something with a pH which is slightly acidic to lower the pH back to 5.5 – 5.7.

Also pH values should differ with product type.

Cleansers 7 – 8 to assist the removal of fats and oils

Toners 4 – 5 to counteract the cleanser

Moisturisers for Dry Skin 4.5 – 6.5 (see above)

Moisturisers for Normal skin 6.5 – 7.5 (see above)

Moisturisers for Oily skin 7.5 – 8.5 (see above)

Chemical Free

This, to chemists, is the most ridiculous statement in the market today. To us everything is a chemical, water is a chemical, olive oil is a chemical. You cannot have anything that is chemical free as that would be nothing.

We know that what is meant is that the product should not contain any dangerous chemicals and we accept that; but to proliferate the statement “chemical free” is to proliferate a perception that we use materials that are harmful, and that is incorrect.

Alcohols – Ethyl Alcohol (Ethanol)

Yes – Ethanol can be drying. When you apply Ethanol based products by wiping or washing (such as when cleansing the skin with anti-acne wipes) then it will remove the skins oils and leave the skin feeling dry.

If, however you add 5 to 10% Ethanol into a cream, for purposes of cooling skin, acting as a skin penetration enhancer or as a solvent, apply the cream to the skin by rubbing it in and leaving it there, then the ethanol will evaporate without taking any oils with it, hence will not be drying.

We cannot take one circumstance and expect this to apply to all uses!

Alcohols – Cetyl Alcohol

While the chemical classification is of an alcohol, Cetyl Alcohol is a wax, derived from Vegetable Oils and not a solvent type alcohol. It is used to thicken creams and lotions and add shine to hair care product effects. It has been used for over 50 years with NO reported problems. (Not sure where the customer got the information that it is reported to cause skin irritations but this assumption is totally incorrect) nor would it be drying on skin like Ethyl Alcohol (see above).



A ONE STOP shop
for all your analytical
testing needs



Microbiological Testing for Cosmetic Products

Non Sterile Microbiology Testing (Harmonised USP/BP/Ph Eur methods)
Preservative Efficacy Testing (USP and BP Methods)
Water testing (USP and BP Methods)

Environmental Monitoring (Air Monitoring, Settle Plates, Contact Plates & Swabs)
Pharmaceutical Testing - (Raw Materials, Finished Product, In-Process)

For all enquiries to our TGA licensed laboratory contact:

t +61 3 9737 4300 e info@chemicalanalysis.com.au w chemicalanalysis.com

(Lic no: MI-2011-LI-03353-3)

Sodium Lauryl Sulfate

Sodium Lauryl Sulfate has been implicated in many purported health problems. First created in the early 1950s SLS has been used in almost all conceivable products, probably in the toothpaste you are using now. Based on one 1958 article by a Japanese scientist and subsequent misinformation this material is now considered unusable if you want to market a product in today's market.

Sodium Lauryl Sulfate has been criticised for its Eye Irritation. Well yes it does irritate eyes but so do 99% of other materials. The reason we had used Sodium Lauryl Sulfate in eye irritation testing (as the standard) was that we could obtain it in 100% pure form and that it always gave the standard response (incidentally the eye irritation rating was a 3.1 out of 10, hardly enough to send you blind). To use the fact that it was a standard in such testing, as a detrimental fact, is misconstruing the truth and causing unwarranted bias against Sodium Lauryl Sulfate.

Sodium Lauryl Sulfate was associated with Heart Problems because the molecule contained Sodium Salts. When applied topically this complaint was too ridiculous to even contemplate.

Its association with Cancer was even more ridiculous as there is nothing there that is considered carcinogenic, even any

impurities that may be present.

It is interesting that the company that initiated the bad press about Sodium Lauryl Sulfate, as a means of criticising its opponents, actually used a surfactant that was more irritant, and when this was disclosed started the alternate accusations such as carcinogenicity and use in eye irritation testing.

By the way I was once told that I cannot use Sodium Lauroyl Sarcosinate because it had the same initials as Sodium Lauryl Sulfate. Fearmongering gone mad.

Parabens

Parabens are the alkyl esters of p-hydroxybenzoic acid and are allowed as antimicrobial preservatives for use in food products, medicinal products and cosmetics. The link between the use of underarm cosmetics and breast cancer has been promoted through a number of publications including the infamous paper by Darbre and Harvey, in which the following facts were considered:

- underarm cosmetics are applied frequently to an area directly adjacent to the breast;
- they are not rinsed off, but have the opportunity to accumulate in the underarm and upper breast area;
- the upper outer quadrant of the breast is the most frequent site of carcinoma;
- estrogens are known to be involved in breast cancer;

Visit our Saloon ASCC Annual Conference 3-5th May 2017 Booth 11& 12

AVENIR
INGREDIENTS
www.aveniringredients.com.au
GOLD SPONSOR

Come and Say Howdy to our Partners !

drstraetmans
KahlWax
LIPOTRU
Cobiosa
SouthernCross BOTANICALS
FLORATECH

- parabens have shown to exert some weak estrogenic effects;
- parabens have been reported to be included in 99% of all cosmetic products;
- methyl paraben has been measured in human breast tumours at a 12.8 ng/g level, while ethyl, propyl and butyl paraben were found at 2.0 – 2.6 ng/g in the affected tissue.

[Byford et al. 2002, Darbre 2003, Harvey 2003, Harvey and Everett 2004, Darbre et al. 2004a, Harvey and Darbre 2004].

These publications led to a number of “letters to the editor” and opened a discussion on the scientific evidence linking the use of underarm cosmetics to a higher incidence in breast cancer.

The major remarks in response to Darbre and Harvey’s paper were the following:

(i) there were some important deficiencies in the study design:

- lack of control tissue when measuring concentrations of parabens in breast tumours;
- blank samples clearly contaminated with parabens;
- high variability in individual blank values;
- no study of the general therapeutic history of the tissue donors
- no mention of the paraben-containing anti-cancer drugs the patients were using;
- no study of donors’ exposure to consumer products containing parabens;
- brief descriptions of tissue handling;

(ii) the most frequently occurring paraben was the methyl ester, which had shown to have the lowest estrogenic activity in the in vitro and in vivo estrogenicity studies;

(iii) existing epidemiological data indicate the absence of an association between underarm cosmetics and breast cancer;

(iv) the majority of underarm cosmetics do not contain parabens as preservatives (> 98%)

(v) the lymphatic drainage system that would be considered the major course of transfer would be from Breast to Underarm, not the reverse direction making an effect highly improbable.

[Golden and Gandy 2004, Jeffrey and Williams 2004, Flower 2004].

Darbre et al. and Harvey formulated replies to these comments and therein clearly state that it had never been their aim to link tumour grade, quadrant incidence of the tumour or patterns of underarm cosmetic use in patients. Moreover, Darbre et al. acknowledge that the study on the concentrations of parabens in breast tumours could not identify either the route of entry or the source of the parabens. Carcinogenicity was not considered in the study and the presence of parabens was not claimed to cause the breast tumours. Finally, they mention that epidemiological studies of underarm cosmetic use and breast cancer fell out of the scope of the paper and were, therefore, not discussed [Darbre et al. 2004b, 2004c, 2004d, Harvey 2004].

In September 2004, the Danish Institute of Food and Veterinary Research issued a report titled “Note on Parabens

in Food, Cosmetics and Consumer Products”. Therein, the authors also elaborate on the suggested relationship between the use of parabens in underarm cosmetics and the development of breast cancer. They came to the conclusion that there is no indication to support such a causal relationship [Anonymous 2004].

As a final word on parabens, the following chart lists the relative scale of Estrogenic Potency of common sources of Estrogenic activity, as measured by in vivo potency – uterotrophic test (rat).

Ethinylestradiol (a single birth control pill):	1,000,000
Phytoestrogens (from your diet):	60 to 100
Subcutaneous injection of Butyl Paraben:	0.50
Human dermal exposure to low concentrations of Butyl Paraben:	<<0.10

I ask therefore, what is the problem if topical parabens contribute less than 1000 times less estrogenic activity than your diet?

Still, having said that, like formaldehyde, it may be commercial suicide to highlight the use of parabens in modern cosmetics, particularly to users of “natural” products.

Propylene Glycol

It is fair to say that I do have some concerns when the level of Propylene Glycol exceeds 50% (notably in the skin irritation by drying at this level) but to be equally fair I also have concerns about Glycerine used at levels well below 50% (ie. above 30% Glycerine is considered to have dangerous skin dehydration effects) or the occlusive effect, causing a reduction of skin respiration, by using some vegetable oils at greater than 50%, just to name a few.

The propagation of such misinformation shows gullibility in believing, in isolation, any “bad publicity” that is printed and not considering the vast body of knowledge that supports the safe use of these materials.

Let me state a few FACTS about Propylene Glycol.

- the material can be obtained in such pure state that it is an accepted ingredient by the worldwide Regulatory, Pharmaceutical and Medical industry as a safe and effective additive. Propylene Glycol has probably had more than its share of studies about safety in use (probably more safety studies than the majority of “natural” chemicals being used) and still accepted for common use.
- Propylene Glycol was created for the personal care industry over 50 years ago, and taken up by industrial and household chemical producers that wanted the same effect of humectancy as we were achieving in personal care products. It is true that nowadays there are two grades of Propylene Glycol, one for personal care and therapeutics and another for industrial applications, the difference being in the degree of absolute purity, the pharmaceutical grade being greater than 99.9% pure. So, to use the comment that it is used in industrial applications as a derogatory phrase meaning we use nasty industrial chemicals in our products has no foundation

whatsoever and may even be considered offensive. You should be complementing the Industrial sector for using safe and pure materials.

- Lastly two facts from (adverse) customer's comments are that;
 1. it is not used in anti-freeze (this is Ethylene Glycol – a completely different chemical entity) and
 2. it is NOT found in most Shampoos, Conditioners or Body Lotions.

Mineral Oil/Petroleum Jelly

Olive Oil has undergone many physical processes (eg. Cold pressing then filtration to remove higher melting point components) and chemical purification processes (such as caustic refining, peroxide bleaching, and the use of antioxidants to prevent the oil from becoming rancid), to produce a commercially acceptable oil. It is interesting to note that Mineral Oil is organic, is derived from a renewable source (if you wait another few million years for a forest to putrefy underground) and undergoes only physical fractionation for purification, plus does not need chemical antioxidants to prevent it from becoming rancid. I often ask which is the more natural; Mineral Oil or Olive Oil?

What Are the Top Myths About White Mineral Oil? (from an article by Penreco)

An unassuming chemical comprised of a mere two atoms, carbon and hydrogen, mineral oil finds itself the center of a

maelstrom of myths, which target the compound with an eye on discrediting the chemical in the popular consciousness. Like the vast majority of myths however, separating out the truth from the fiction is like removing the wheat from the chaff to discover the true value of a particular statement as it relates to the ubiquitous compound that has enjoyed wide purchase since first arriving on the scene approximately around the time of the First World War.

Mineral Oil is Bad and Based on Petrochemicals

While it is true that mineral oil is created out of the same refining process that produces harmful impurities, the fact remains that hundreds of materials are distilled from the refining of crude oil and not all are dangerous. Available for use in a wide-range of commercially available products from the gasoline that goes into vehicles to Vaseline that goes on a baby's bottom, mineral oil falls on the benign spectrum of use with high purity and tight governmental oversight to ensure safe uses and practices.

Mineral Oil is Banned in the European Union

Owing to an influx of unrefined petroleum jelly from Eastern Block countries prior to 2004, exhibiting dark brown and yellow colours, the European Union moved to blocked all petroleum oils that did not adhere to best practices in terms of manufacturing processes. For this well bandied myth to hold water, it would more accurately be said, "The EU bans poorly



BRENNTAG

Revealing the Power of Beauty

DSM Nutritional Products Asia Pacific
30 Pasir Panjang Road,
Mapletree Business City #13-31,
Singapore 117440
Phone: +65 6632 6617
Fax: +65 6632 6600
Email: info.pc-apac@dsm.com
www.dsm.com/personal-care

DSM Distributor in Australia and New Zealand:
Brenntag Australia Pty. Ltd.
260 - 262 Highett Road (Head office)
Highett, 3190 Victoria
PO Box 84, Highett VIC 3190, Australia
Phone: +61 3 9559 8333 Fax: +61 3 9532 0802
Email: info-aus@brenntag-asia.com
www.brenntag-asia.com
Offices also in NSW, QLD, WA, Auckland

At DSM we believe that beauty enriches people's lives.

To reveal beauty's true power we continually challenge ourselves to understand in depth your needs, your brands and people's beauty aspirations worldwide. With foresight, imagination and a deeply rooted sense of beauty we connect and leverage our bright science in Skin, Sun and Hair Care to craft transformational beauty care ingredients and concepts that are loved.

Together with you we want to create a brighter, more beautiful world for people today and generations to come.



refined mineral oil.” Beyond that, the European Union accepts petroleum jelly products in the same manner as the United States and Australia.

Mineral Oil Blocks Skin from Breathing and Inhibits Detoxification

There is no evidence that suggest applying mineral oil, in a cream, has any bearing on the ability of skin cells to “breathe”. If anything, a thin layer of Mineral Oil or Petrolatum on skin will protect it from the effects of “pollution”. Then there are those that argue that mineral oil somehow inhibits the detoxification process show a lack of anatomical knowledge. For example, the bulk of detoxification efforts occur in the liver before being carted off and disposed of in the body’s urine. While it is true that some toxins are released via the sweat glands and through sloughing skin cells, one would need to literally baste themselves continuously to adversely affect the sweating process.

Mineral Oil Causes Skin Irritation

As mentioned, mineral oil is a boring chemical compound that enjoys only two atoms, Carbon and Hydrogen. While the majority of chemical reactions spark via interaction with functional groups, those parts of molecules that can readily interact with the functional groups of other molecules, and white mineral oil hosts no functional groups. Like the chemical version of a wallflower at a dance, mineral oil is non-reactive, and does not even dissolve when put into contact with water. Owing to this un-reactive response, the chemical forms an excellent layering bond with strong barrier properties. For this reason, cosmetic manufacturers, for the benign effect it has on the skin, favour white mineral oil because skin reaction is practically unheard of in people who use the formula.

Lanolin

There were some health concerns about Lanolin some years ago. On investigation and following the development of more sophisticated analytical methods it was found that the cause of skin irritation was the presence of pesticides with levels of 20–80ppm (from the fields where sheep graze and having been accumulated in the wool grease), particularly DDT and Dieldrin.

Two factors have changed this situation;

1. Farmers have been banned from using DDT and Dieldrin, particularly in food processing areas and grazing pastures.
2. Advances in technology by processors of Lanolin have enabled the presence of pesticides to be lowered from the former 80 ppm to levels below 1 ppm.

As a consequence, commercial Lanolin no longer has the level of irritation that was apparent when Lanolin usage was discouraged, and should be considered safe for human application.

Natural = Safe Synthetic = Harmful

The term “Natural”, used in today’s advertising, infers that the material or product is safer than a synthetic chemical. In many cases, this cannot be further from the truth. Some natural materials are safe, but many may be quite hazardous or even fatal if incorrectly or inappropriately used.

In extreme cases, Formaldehyde is a natural preservative, Natural Pyrethrin is extremely hazardous whereas Synthetic Pyrethrin has been modified to remove the components hazardous to humans, Vitamin A can be hazardous in concentrations as high as 0.5%, Bee Venom, Temple Viper venom, and other toxins used as anti-wrinkle ingredients can cause immune deficiency if over-used, and almost all the pure essential oils, we use, are considered poisons by government regulatory authorities – the list goes on.

The corollary is also false – it is a fact that many synthetic chemicals used in cosmetics are amongst the safest (with respect to toxicology, skin irritation or allergic reactions) as they have been scientifically engineered to be so, also, undergoing some of the most stringent testing – something a lot of natural ingredients have not. Synthetic oils being perfect examples of safe cosmetic ingredients.

Finally, a plea to all Beauty Therapists – Consumers do not believe those nasty chemists in white coats so please spread the word that SLS, Parabens, Lanolin, etc are NOT harmful – they will hopefully believe you and we can get back to some form of sensibility.

Thank you.

The next issue we will discuss Viscosity, Refractive Index, and Density

New Zealand Society of Cosmetic Chemists Annual Conference

26-28 July, 2017

Theme:

Gateway to Science and Sustainability

Rippon Vineyard, Wanata, NZ

it's QuizTime

by Wendy Free

It's that time of year again where it's fun to tickle your brain and think about just how knowledgeable we are (or aren't). As always there are three levels; enjoy.

Level One: Just starting out (or getting too old for this)

1. Ingredients that appear in COSIng

- a) are approved for use in the EU
- b) have been allocated an INCI
- c) are approved for use internationally
- d) can be used without restriction
- e) none of these

2. Which country / jurisdiction issues a "positive ingredients" list

- a) Australia – AICs
- b) New Zealand – Cosmetics Standard
- c) EU – COSIng
- d) USA – CTFA
- e) ASEAN – ASEAN Standards

3. A surfactant with an HLB value of 15 – 20 is NOT

- a) for oil in water emulsification
- b) for water in oil emulsification
- c) useful as a solubiliser
- d) Cetareth-20

- e) Clearly soluble in water

4. Caramel is

- a) CI Natural Brown 10
- b) E150
- c) CFR # 73. 1575
- d) CI 77891
- e) all of the above

5. In Cosmetics, 'extract' means

- a) Its perfectly natural
- b) Its not 'synthetic'
- c) It has the same properties as the 'parent' material
- d) Its safe
- e) I don't know

6. Soap is

- a) The bit that's left over after the exothermic reaction between a triglyceride and lye, other than glycerine
- b) A detergent
- c) Not a cosmetic in the USA
- d) Both a and c
- e) A lozenge or bar (solid) used for cleansing

7. GHS is

- a) the globally harmonised system of



- classifying & communicating chemical hazards
- b) not used in Australia
- c) now law in Australian (since 1st Jan 2017)
- d) re-naming MSDS as SDS
- e) all except b

8. Tea Tree Oil is

- a) None of the below
- b) permitted without restriction in Australia at concentrations less than 25%
- c) recommended to a maximum of 2% in the EU for skin contact products
- d) reactive to light, heat and oxidants, increasing its irritancy

e) Each of b, c and d.

9. Where is the silicon?

- a) all of these
- b) Mica
- c) Dimethicone
- d) Talc
- e) Kaolin

10. Which is most likely be classed as flammable?

- a) 10% ethanol
- b) 15% ethanol
- c) 20% ethanol
- d) 25% ethanol
- e) none of these

Level Two:

Been around the block, a couple of times or maybe more

11. In regards to REGULATION (EC) No 1223/2009 clause 16; To ensure their safety, cosmetic products placed on the market must be

- a) Produced according to good manufacturing practice.
- b) Made in a facility certified to comply with ISO 22716
- c) Made in a facility certified to comply with ISO 9001
- d) Produced according to suitable quality regimes
- e) None of the above

12. Which is a therapeutic claim?

- a) Antibacterial
- b) Dandruff
- c) Treatment
- d) Soothing
- e) Acne

13. Avobenzone is also called

- a) Benzophenone-3
- b) Benzophenone-8
- c) Butyl Methoxydibenzoylmethane
- d) Homosalate
- e) None of the above

14. An Australian cosmetic sunscreen includes

- a) any sunscreen with a claimed SPF of 15 or less
- b) any sunscreen with an actual SPF of 15 or less

- c) any sunscreen that does not mention skin cancer
- d) any product with a claimed SPF below 30
- e) a lip balm, with an actual SPF of at least 60, labelled as SPF50+

15. Nano materials

- a) Are perfectly fine and have no notification requirements anywhere
- b) Have reporting requirements in a range of jurisdictions
- c) Can include colours such as Carbon Black / CI Food Black 3
- d) Can have different properties to their non-nano counterparts
- e) Each of b, c and d.

16. Which of the following is NOT a fatty acid from coconut oil?

- a) Caproic
- b) Caprylic
- c) Capric
- d) Mystic
- e) Myristic

17. Where is the aluminium?

- a) All of these
- b) Mica
- c) Bauxite
- d) Alum
- e) Kaolin

18. "Organic" is

- a) any substance that occurs naturally
- b) a chemical based on carbon
- c) a new way to stand out from the crowd
- d) an easy way to stand out from the crowd
- e) a growth category in food sales in Australia

19. Which is NOT true; In the USA

- a) The manufacturer is responsible for the product
- b) The supplier is responsible for the product
- c) Failure to substantiate shelf life can result in a product being declared adulterated or misbranded.
- d) There are only about 8 ingredients that are prohibited in cosmetics by FDA regulations

- e) There are required font sizes for the ingredients list.

20. Which is NOT true; In Australia,

- a) The manufacturer is responsible for the product
- b) The supplier is responsible for the product
- c) There is a 'mandatory standard' for labelling of cosmetics
- d) There are only about 8 ingredients that are prohibited in cosmetics by Australian regulations
- e) There are required font sizes for the weight / volume statement

Level Three: Guru (or Certifiable)

21. Where a therapeutic sunscreen names an ingredient OCTYL METHOXYCINNAMATE its cosmetic equivalent name could be

- a) Ethylhexyl Methoxycinnamate
- b) Octinoxate
- c) Octocrylene
- d) Octisalate
- e) Either a or b

22. According to FOOD AND DRUG ADMINISTRATION COMPLIANCE PROGRAM GUIDANCE MANUAL Chapter 29 – Which triggers an automatic 'for cause' assessment by FDA inspectors?

- a) There is no such thing
- b) High risk – Wet wipes
- c) High Risk – Tattoo ink
- d) Non-traditional preservatives including Caprylhydroxamic acid, Glyceryl caprylate, p-anisic acid
- e) Each of b, c and d

23. Talc is

- a) Not usually of concern, so long as its in its natural form
- b) Not usually of concern, so long as its in its purified form
- c) Prohibited for skin contact
- d) Clearly linked with an increased risk of ovarian cancer
- e) Strongly linked with lung cancer

24. POA (period after opening) is

- a) the period of time after opening that the cosmetic product may be used

- without any harm to the consumer.
- b) Where the minimum durability is more than 12 months, the POA is the period of time after opening that the cosmetic product may be used without any harm to the consumer.
- c) Where the minimum durability is more than 24 months, the POA is the period of time after opening that the cosmetic product may be used without any harm to the consumer.
- d) Where the minimum durability is more than 30 months, the POA is the period of time after opening that the cosmetic product may be used without any harm to the consumer.
- e) Where the minimum durability is more than 36 months, the POA is the period of time after opening that the cosmetic product may be used without any harm to the consumer.

25. What do Bismuth Citrate, Citric acid, Galactartaric acid, Metaphosphoric acid and Oxalic Acid have in common?

- a) They have similar pH in solution
 b) All are soluble up to 250g/L in water
 c) They are all classified as chelators
 d) They all occur naturally in citrus species
 e) They are all chiral

26. Which is the scheduled poison?

- a) ASPARTIC ACID
 b) BENZYL BENZOATE
 c) CLARY SAGE OIL
 d) DEOXYCHOLIC ACID
 e) ETHYL ALCOHOL

27. Which is not potentially implicated in the formation of Nitrosamines?

- a) Arginine
 b) Bronopol

- c) Coconut DEA
 d) Formaldehyde
 e) Sodium Laureth Sulfate

28. Which is not directly associated with the stratum corneum?

- a) Calcium gradient
 b) Urea cycle
 c) Citric acid cycle
 d) Pyrrolidone carboxylic acid
 e) Moisture gradient

29. Which is not a dermatological condition?

- a) Alopecia
 b) Balanitis
 c) Cephalocarida
 d) Darier's disease
 e) Erysipelas

30. Which is NOT True (according to <http://cosmeticsandskin.com/cosmetic-timeline.php>)

- a) Vaseline introduced in 1870
 b) Cashmere Bouquet soap released in 1872
 c) Colgate begins selling toothpaste 1873
 d) Gillette safety razors 1901
 e) Mum deodorant released 1923

For references to the source data or to point out my errors please feel free to contact me talktous@qualitymatterssafetymatters.com.au

ANSWERS: 1.b, 2.a, 3.b, 4.e, 5.e, 6.d, 7.e, 8.e, 9.a 10.d the cut off is usually around 24% in the absence of other flammables. 11.a (yes really!), 12.b all of the others are conditionally permitted, for example hair treatment, acne cleanser, 13.c, 14.e, 15.e, 16.d, 17.a, 18.b all products were organic before synthetic chemistry, certifying products as organic is very complex and time consuming, and Food and Grocery Council of Australia states that these lines have been static for at least the last decade. 19.b, 20.d, 21.e, 22.e, 23.b Natural talc can contain asbestos, none of the studies have been conclusive or of sufficient quality to implicate talc as being of specific concern. 24.d, 25.c, 26.d, 27.e. Anionic surfactants are best at minimising formation of nitrosamines, all of the others are potential amine donors or synergists. 28.c That's at cellular level in all cells, 29.c. That's a shrimp; 30.e. It was released in 1888



Need Help?

If you ever struggle with:

- Client attraction and retention
- Staff management
- Improved profitability
- Salon Marketing
- Service and menu development

Then why not give me a call to talk about how a POWER CONVERSATION package of 3 coaching sessions could turn that around for you.

Testimonial: *Thanks so much Pam. Your help has been just wonderful so far. There is no way I could have got myself this organised. Thanks for making this journey not seem so overwhelming.*

Lisa
Lumiere Beauty

T. **0431 975 515**
 W. **www.SalonSavy.com.au**
 E. **pam@SalonSavy.com.au**



alternative facts

by Margaret Smith



This is one of the latest BUZZ phrases coming from the “world’s largest democracy” and I LOVE it. And the dude (now a fully endorsed presidential term) that runs the big democracy is a gift that keeps on giving to writers, bloggers and other crazies all over the world.

And from this land arises, the great Google and Facebook. While neither is responsible for content they are conduits and forums for all sorts of facts and alternative facts. Oh, and don’t forget that search engine algorithms can really skew what results you see from your searches.

Unlike the supercomputer “Deep Thought” (Hitch hikers guide to the Galaxy by Douglas Adams), when I ask Google a question about what a fact is, “It” tells me a lot quicker than 7.5 million years:

Origin:

late 15th century: from Latin *factum*, neuter past participle of *facere* ‘do’. The original sense was ‘an act’, later ‘a crime’, surviving in the phrase before (or after) the fact. The earliest of the current senses

(‘truth, reality’) dates from the late 16th century. wikipedia

Whoa neddy! That fact of origin IS interesting. However like Deep Thought the answers can be jolly baffling.

One of the handmaidens that assists Google to answer our questions is “Wikipedia”. It is, in its words, “designed to help you find, discover, and explore knowledge”. Its definition of a fact is:

A fact is something that has occurred or is correct. The usual test for a statement of fact is verifiability—that is, whether it can be demonstrated to correspond to experience. Standard reference works are often used to check facts. Scientific facts are verified by repeatable careful observation or measurement (by experiments or other means). wikipedia

So it would be on an often daily basis (actual fact) that we (Syndet munchkins) are instructed by customers, NOT TO USE what have now been termed “nasties” in the formulas we devise for them. I will make it clear that I think I

first used the term “Google Friendly” (inci list) many, many years ago, so I am very much a part of the tribe that adheres to the Google God’s edicts. A material that does not “Google” well is a “nasty”. No matter if it is alright as far as the “facts” or “evidence” shows, whatever rises to page 1 of Google, becomes reality.

Thus I am clear that our business and indeed our industry are affected by Alternative Facts practically every day.

Most of the time I look at Google Scholar, yes the god box and Google actually have a site that only deals in

peer reviewed (I hope) academic papers. Trouble with these is that most of the time there is a charge to read them in full, and secondly they are so bloody boring one turns to stone attempting to read them if one does end up paying for them. Another problem is that a lot of academic stuff is now just about a material that can be turned into a product of commerce.

Not that there is anything wrong with commerce. Yet there can be a little bit of bias and that can lead to the “real”

Google where all the juicy and readable stuff resides.

Back to my knitting, (Peter Dutton really does understand the role of government and commerce, he is just misunderstood).

Aside from all this editorial, what I am really interested in, are the repercussions or the unintended results of commercial search engine algorithms that we think are a smart tool to find out what is OK, really safe and works and yet can deliver results to the unsuspecting that prove to

be otherwise. What we as punters and academics and chemists and brandowners and suppliers alike want I think, are good simple answers. And now our wonderful invention the internet and the www has made us so confused. Who or what are the drivers of our confusion, what are their motivations?

1 FAME and FEAR. The bloggers who decide to develop “evil” lists on the God box, become incredibly well known for their ability to denounce all sorts of Science (evil) knowledge. They develop alternative facts about all sorts of materials, practices etc. They use fear, and fear only to get us to believe it. Here a brief article reprinted from the Bloomberg site. It gives us the formula for driving home a homespun fact...make it scary. Will it shoot you? Will it harm your children?

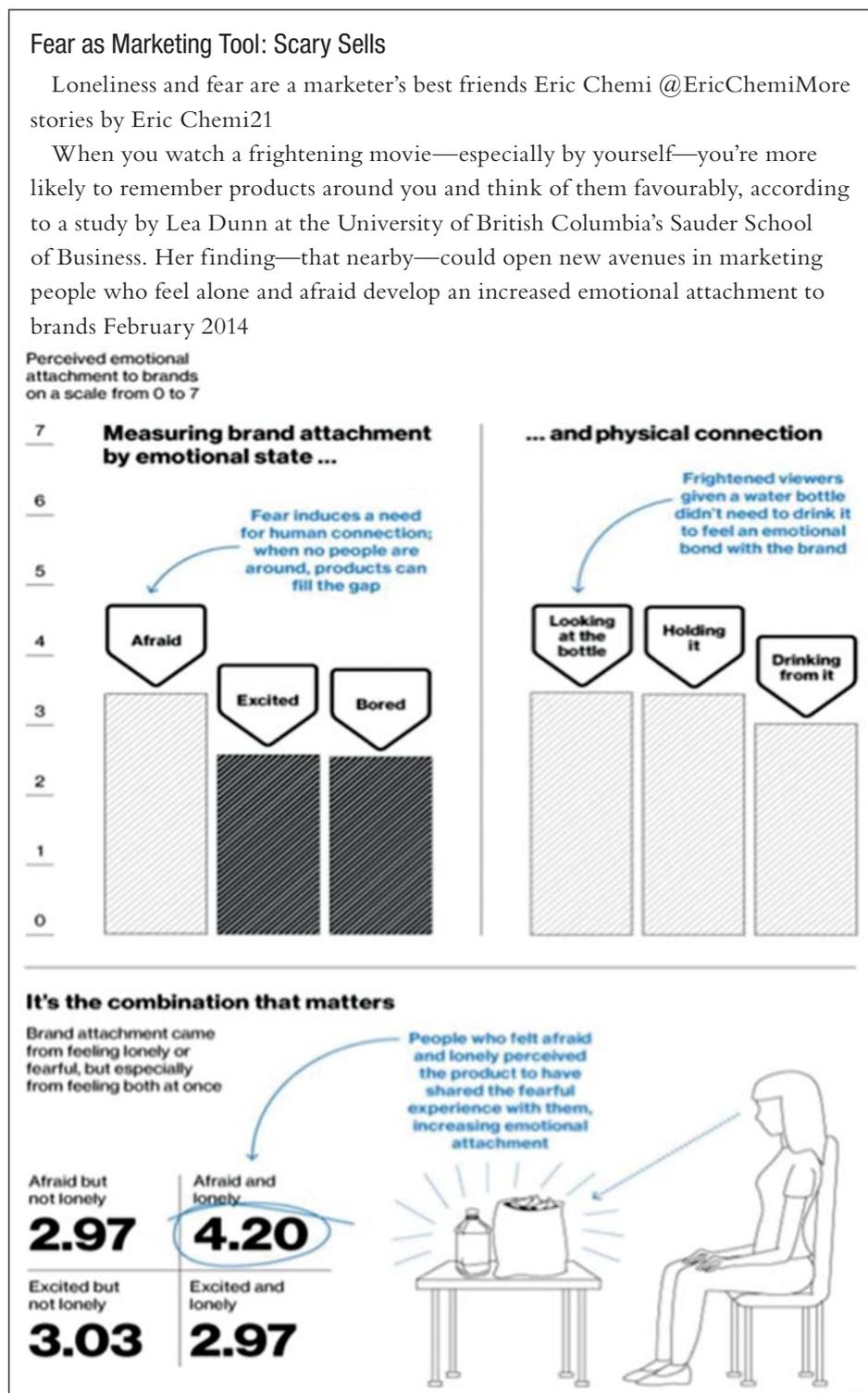
The fame of the blogger generally gets exponentially bigger with the loudness of the outrage. However follow the money I say and the outrage either arises from or leads to a range of products that do not contain any of the mentioned hideous unsafe evil materials. Again what one needs to do to determine whether the blogger has goodness in their heart and truly wants to save us, is to follow the (their) (our) money, donations, fees etc. Are they flogging a little logo sticker to put on ones label or are they selling something in a tube to us?

And I want to know from them are they dyeing their hair, having cosmetic surgery, dentistry or driving a petrol car?

I do two of those and I am not trying to save you or myself. And in one of those I have been asked not to, so I look more distinguished, (read old and grey). Have to say how hard that one will be to comply to.

Lost in translation

I agree with many (maybe some) of the claims from (maybe some) of these cosmetic and materials review sites, with (some) massive exceptions. Most of us punters do not know the difference between cetearyl alcohol and alcohol. Most of us did not pass go in chemistry. We are literally lost in the translation of an ingredients list.



Lifted from www.Bloomberg.com

I feel these bloggers and paid logo sellers either take advantage of this actual FACT (that we generally have no idea what a chemical is, let alone it's inherent goodness or evil) or they have no darned idea either. And truly I think both are true.



egyptiangoddess wrote:

I was reading someone basically making fun of Sclerotium Gum and saying it could cause yeast to grow or something. Is this ingredient really safe to use or can it cause yeast to grow?! Is it safe for people with rosacea? Is there any proof or studies saying it is safe? I'm really confused and hoping someone can clarify. • Obviously if it causes yeast to grow, that really concerns me. •

TIA if anyone can help.

I feel that saying something is a fact or true or whatever is so difficult and that Sean Spicer has now infected me with some crazy virus or disease.

I have an admission to make – I have a shocking dermatological reaction to potassium sorbate and many organic acids used as preservatives. I suspect this is in part from my over exposure to these ingredients while making hundreds and thousands of samples of products with so called “safe and natural” preservative systems.

I really believed in the ‘safe and natural’ preservative systems. But now, if I am in contact with many of these materials or products that contain them, I get instant contact dermatitis. Yet to

make Certified Organic cosmetics I need to use many of these materials and I want to test and try them. Oh, and just to add an extra layer of complexity, some raw material active blends are preserved with these same (yet undeclared) preservatives. I need to wear gloves and face mask. I cannot test the product on myself. The irony is that these ‘systems’ that upset my skin (and I’m not alone in that response) are all ‘google friendly’. Go figure!

Yes there are alternatives and this leads on to my next unintended or maybe intended result.

2 THE PRICE. There does seem to be a thread here (follow the money). To use something that is “safe” there is a cost.

i n s p i r a t i o n

The unlisted ingredient in everything we produce.

With over **30 years experience** in the development and manufacture of **premium to mass skincare product** ranges, in **quantity** and **ON TIME**. Syndet produces to the highest standards using quality ingredients and processes. We formulate products from **soap-free bars** to **natural, organic and conventional skincare in metal or plastic tubes, flow wrapping** and **cellophane wrapping**, short and long run **sachets** and all under clean room **ISO GMP** standards.

We can talk to you (in Chinese, Hindi or English) for adventurous solutions that stand out in a crowded marketplace for all the right reasons

ISO 22716 Certificate FR13/018254

30-32 Gatwick Road, Bayswater North VIC 3153 CALL 03 9761 6726 •

Get inspired EMAIL marg@syndet.com.au or laurel@syndet.com.au

www.syndet.com.au



If one cannot use something that is a few dollars per kilo, then an alternative that is GF (and that is not gluten free, although do not lead me there or that will be another 700 words that you have to wade through). With gums for instance...xanthan is cheap, but if you want crystal clear and less snotty (yes real straight xanthan is really full on flu snotty and cloudy), then triple, quadruple the price. Then with alternatives again most of us do not understand them. For example what is Sclerotium Gum? (an alternative that should be very GF) but already the God machine buzzes with fear and innuendo:

Where will this go? Will (fermented rice brand of cosmetic) and their ferment go to the horror wayside as giving us thrush or something that another "alternative fact" brand will create to scare the living bejeezus out of us. Will we all end up growing fungusy? No, at least not with (fermented rice based brand) 'cos they use parabens to kill off their yeasts.

Oh and almost forgot. Sclerotium Gum is at least 20 times the price of Xanthan Gum and you need to use a bit more so it does get pricey. Now watch this space when I get a dozen alternatives by email to this gum alternative.

And I am OK with this info then it leads to another subject altogether. Maybe I have lost my train of thought.. it happens . Oh yes it happens, and I am getting a bit over raving on about silly web sites and their crazy opinions.

If you go down to the woods today, you'd better go in disguise.

Now I bet this has happened to everyone.... you really, really want something specific, like a frock or special shoes for a wedding or something. (In our world, a particular raw material or bottle.) So, you go shopping, for days and eventually you give up trying to find what you want..it is in your head what you need, it has to match your handbag , YET what you can sort of find is not your size or colour or price.

I ask and ask around for a specific

ingredient or material, I ask for a sample, I beg for a sample I beg for a price. You formulators know what I am on about.... my/our customers don't, 'cos they think everything IS IN the shopping centre and available immediately. They expect everything one wants is available quicker than 8 weeks of waiting and begging, they seem to think that if we express we are interested in purchasing, then a sample and price is the LEAST a supplier will do to get a sale.

You suppliers know who you are when you are good you are very, very good and when you are bad you are darned tootin horrible... nighty night kids and remember,

Don't ever go down to the woods today or any other time unless you are dressed as a panda. Pandas can get away with anything. Love to all M

"All opinions and comments expressed are my own crazy as bat poo, are fully copyrighted, and may not be used without written permission." marg@syndet.com.au

COSMETIC SCIENCE, BRAND MANAGEMENT & REGULATORY AFFAIRS



ON-LINE TRAINING

Study at a time and place that suits you, anywhere in the world!

Cosmetic Science

- Diploma Of Personal Care Formulation
- Certificate in Advanced Cosmetic Science
- Certificate in Beginners Cosmetic Science
- Certificate in Organic Formulations
- Certificate in Colour Cosmetics Formulation

Regulatory Affairs

- Certificate in Cosmetic Regulatory Essentials
- Certificate in Cosmetic Marketing Compliance
- EU Compliance Workshops

Brand Management

- Diploma of Personal Care Development and Promotion
- Certificate in Cosmetic Brand Management

Short Courses

- Certificate I in Pharmaceutical Manufacturing
- Quality Program



**Institute of
Personal Care Science**

www.personalcarescience.com.au

info@personalcarescience.com.au

facebook.com/InstituteOfPersonalCareScience



INTERNATIONALLY
RECOGNISED
TRAINING

**Contact us for a full course prospectus
and pricing - start straight away!**



Subscription to

the science of beauty



Subscribe now and save 20%

Price includes GST, postage and handling

(Please tick ✓) Prices quoted include GST and postage (Australia only)

1 year \$77 2 year \$124 (save 20%)

e magazine 1 year \$44

Outside Australia 1 year \$120

Tax Invoice

Please find enclosed cheque/money order for

\$ _____

Payable to: Manor Enterprises Pty Ltd
or Direct Debit our bank account

Bank Details

Bank: National Australia Bank
Branch No: 082 617
Account No: 028321631
Account Name: Manor Enterprises Pty Ltd
Swift Code (Outside Australia) NATAAU3303M

Name _____

Company _____

Address _____

Suburb _____

State _____ Postcode _____

Country _____

Mobile: _____

Email: _____

Manor Enterprises Pty Ltd ABN 32 002 617 807

Post to: PO Box 487 Gulgong, NSW 2852 Australia

Phone: 0418 541 998



STEPS



1. Initial Evaluation and Skin typing of ITAo Value



2. Measurement Devices



3. Measurement Probes

No. 29 “Signs of Ageing”

Multiparameter Test

This type of test study is flexible and can be modified to suit specialised skin treatment formulations.

Example Supportable Claims
Visible Signs of Aging
Complete Skin Treatment
Percentage improvement over time

Test Panel Construction

Sex: Female and/or Males Age: 35 through 65 years

Duration of Study

3 months is recommended.
Testing at t=0, 1, 2 and 3 months

Protocol Overview

In order to pre condition the test sites and keep topical treatments constant for all test subjects, panelists are required to abstain from use of moisturizers and skin treatments on the test area for a period of 7 to 10 days prior to study commencement.

On the first day of the study, the panelists are trained on how to apply. For the eye area, this is usually 2 to 3 drops (0.1 mL). An additional amount is required for coverage of the cheeks in order to measure moisturisation. Panelists are required to continue to use the materials as instructed.

Morning, During Day or Evening applications are made according to how the proposed product application instructions.

Measurements

The following instrumental measurements can be included.

1. Moisture by Corneometer
2. Elasticity - Cutometer
3. Wrinkles - Profilometry
4. Pigmentation - Spectrophotometer
5. Skin evenness - Mexameter
6. Pore Measurement - Microphotos
7. Skin Gloss by Glossimeter

Photography

If required, calibrated high resolution photography can be included.

Questionnaire Component

Clients normally provide a customised questionnaire or we can design to suit.

Reports

Detailed reports are outputted, including progress measurements for each time point.

References

For more information on individual protocols for each instrument, see www.dermatest.com.au

Dermatest Pty Ltd
20 to 22 King St
Rockdale NSW Australia
ph 61 2 9556 2601
info@dermatest.com.au
www.dermatest.com.au

3R-Effect for regulation of oily skin and balance of healthy skin microflora

by Sylvia Eisenberg, Heike Hanau¹, L. Heider¹, Dagmar Kleefeld¹, Valérie Bicard-Benhamou¹, Hansjürgen Driller, Frank Pflücker¹

¹MERCK, Frankfurter Str. 250, 64293 Darmstadt, Germany

Introduction

There is something many of us remember from our teenage years but only a few associate with adulthood: oily skin. Oily skin is a major issue, because it affects those areas that are the most exposed, like the chin, forehead and nose. Oily and impure skin causes a real aesthetic problem and may lead to higher acne susceptibility. Even in adults, a healthy facial skin and complexion play an important role. Consumers around the world have become very

self-conscious of their appearance. But overactive sebaceous glands may cause a visible problem. Skin appears as if it were not properly cared for, with large pores and uneven look. The three R's of RonaCare® SereneShield (INCI: Butyl Hydroxycyclohexane Carboxylate) provide a fitting solution where the success lies in regulation, reduction and rebalancing.

Excessive production of sebum is a key contributor to acne. Regulating the amount of sebum on oily skin can reduce

the susceptibility to acne development. Simultaneously, one root cause of acne is the development of inflammatory metabolites (porphyrins), originating from *Propionibacterium acnes*. By reducing the production ability of these irritating inflammatory compounds, acne formation will less likely take root and less likely create the skin appearance we may associate with adolescence. In addition, rebalancing skin's microflora represents a natural way to create more harmony and a basic principle to strengthen the skin's defense system.

Results and Discussion

Regulating Sebum – Oily skin

Alterations in the pilosebaceous unit, an association of sebaceous glands and hair follicles, are involved in acne development. Causes are increased sebum excretion, induced by e.g. stress and hormonal changes, colonisation of the hair follicle by *Propionibacterium acnes*, alterations of lipid composition and its oxidation, and the release of inflammatory mediators into the skin.^{1,2}

Excessive sebum production can be caused by diverse mechanisms in the pilosebaceous unit, such as by the testosterone metabolism. Herein, testosterone is converted into



Figure 1: 3R-effect of Butyl Hydroxycyclohexane Carboxylate

Test compounds	Concentration	% Control	Standard deviation (%)
Control	-	100	5
Finasteride	10 μ M	13	2
BHCC	300 μ M	73	3
Zinc PCA	15 μ M	90	2

Table 1: Androstenedione production in sebocyte cell line

dihydrotestosterone (DHT) by the action of the iso-enzyme 5- α reductase type I. Whereby, mainly DHT interacts with the androgen receptor, expressed in the basal layer of the sebaceous gland, due to greater potency (5-10 times) than testosterone. DHT stimulates sebaceous glands to produce and secrete sebum as well as to induce sebocyte proliferation. Therefore, the reduction of 5- α reductase may lead to a decreased sebocyte proliferation and, with this, reduced lipid production.²

The reducing effect on 5- α reductase activity within the testosterone metabolism was evaluated in a non-differentiated sebocyte cell line. The reduction effect was determined with thin layer chromatography by densitometry analysis of testosterone and corresponding testosterone metabolites, such as dihydrotestosterone (DHT), 4-androstene-3,17-dione and androstenedione. Quantifications were done using the DHT/ testosterone ratio. Studies were performed comparing the effects of Butyl Hydroxycyclohexane Carboxylate (abbr.: BHCC) to Zinc PCA, a cosmetic substance known for reducing 5- α reductase activity. Both substances were tested at the highest

possible non-cytotoxic concentration. The control of the assay corresponds to 100% and the reference substance Finasteride at 10 μ M treat level, a highly active pharmaceutical substance, validated the assay.

Zinc PCA, tested at 0.015mM, had no distinct effect on the 5- α reductase activity, while Butyl Hydroxycyclohexane Carboxylate, tested at 0.3mM, showed a clear decrease of DHT/ testosterone metabolism in comparison to control. Butyl Hydroxycyclohexane Carboxylate reduced the 5- α reductase activity in two different in vitro studies by 25% and is superior to that of Zinc PCA (Figure 2).

Additionally, Butyl Hydroxycyclohexane Carboxylate showed a reducing effect on the production of androstenedione, which corresponds to a reduction of 5- α reductase enzymatic activity, whereas Zinc PCA had only a slight reducing effect (Table 1).

Butyl Hydroxycyclohexane Carboxylate has clearly shown, in two transformation pathways (testosterone to DHT and 4-androstene-3,17-dione to androstenedione), that it lowers 5- α reductase activity.

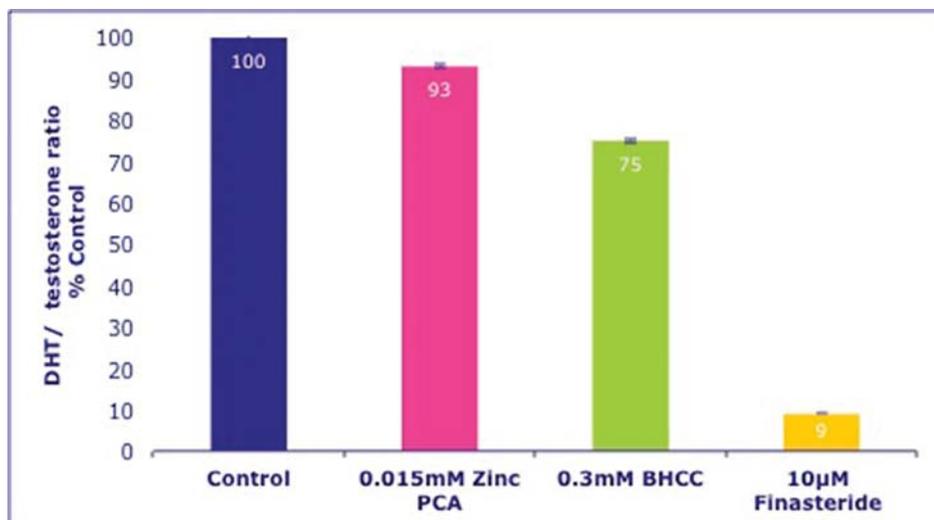


Figure 2: Determination of the DHT/ testosterone ratio in sebocyte cell line

Reducing Inflammation – *Propionibacterium acnes*

Colonisation of the hair follicle by *Propionibacterium acnes* contributes to the pathophysiological mechanisms of acne. *Propionibacterium acnes* secretes lipases, chemotactic factors, metalloproteinases and porphyrins,³ all having strong pro-inflammatory activities and causing keratinocyte damage through inflammation. In addition, *Propionibacterium acnes* can be another cause in stimulating excessive sebum production. *Propionibacterium acnes* is able to stimulate sebum via the corticotrophin-releasing hormone (CRH)-Receptor, increasing lipogenic activity of human sebocytes or is able to induce the sebum production through the IGF/IGF-R pathway present in sebocytes.³ Moreover, *Propionibacterium acnes* forms an adhesive glue, a biofilm. Microorganisms irreversibly grow and adhere onto the corneocytes, producing and forming extracellular matrix polymers, thus interfere with the anti-acne treatment by antibiotic agents.³

Seemingly, reducing the colonisation of *Propionibacterium acnes* and its biofilm formation is one of the main steps in preventing acne-like skin conditions, such as inflamed pilosebaceous units and the development of comedones.

The growth reduction of *Propionibacterium acnes* was evaluated with in vitro bacteria suspension assays and quantified by analysis of the remaining germ colonies. Bacteria suspensions comprising *Propionibacterium acnes* ATCC 6919 were incubated anaerobically at 35°C. The colony count of the bacteria suspensions was determined initially and after defined incubation times, 20 min, 60 min or 24 hours, and then expressed in CFU (Colony Forming Units) per mL. The studies were performed and compared to Zinc PCA, a known antimicrobial cosmetic substance.

Both, Butyl Hydroxycyclohexane Carboxylate and Zinc PCA, showed a complete killing effect on *Propionibacterium acnes* at a use level of 0.5% and 1.0%. In contrast to Zinc PCA, Butyl Hydroxycyclohexane Carboxylate

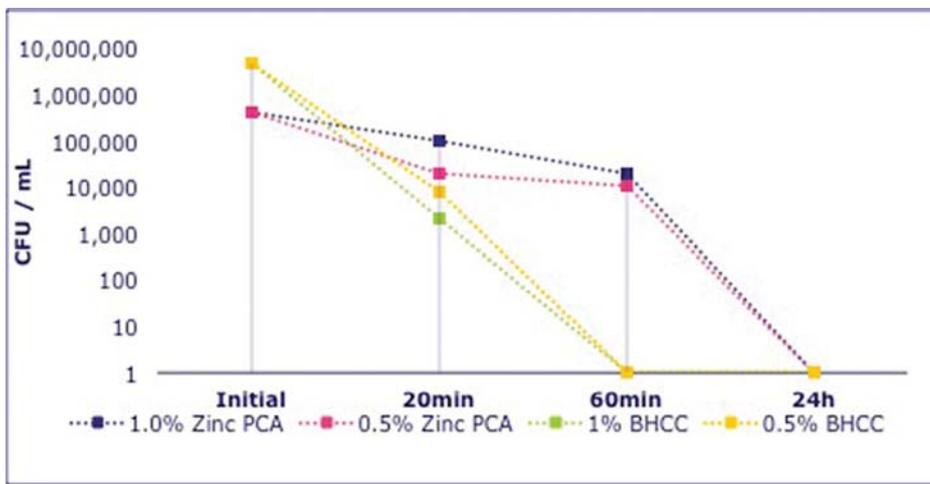


Figure 3: Growth reduction of *Propionibacterium acnes* ATCC 6919

already decreased the growth of *Propionibacterium acnes* after 60 min (Figure 3).

The inhibition of biofilm formation of *Propionibacterium acnes* was evaluated in a hydrogel biofilm model. A cellulose matrix, inoculated by clinical isolates of *Propionibacterium acnes* (standardised to 108 CFU / mL) to seed a biofilm in the 3D matrix, was treated with 1.0 v/v% Butyl Hydroxycyclohexane Carboxylate solution. The cellulose matrix was then applied to the hydrogel surface to allow for a continuous exchange of fluid between the Butyl Hydroxycyclohexane Carboxylate solution/ biofilm/ hydrogel to stimulate dynamic fluid exchange within the skin tissue. Cell viability was then compared to cell viability of untreated biofilms after incubation at 37°C and 0, 1, 3, 8 and 24 hours.

Under the experimental conditions of the assay, both treatments showed a statistically significant inhibition of the biofilm over a 24-hour-period in comparison to the untreated control.

Application of Butyl Hydroxycyclohexane Carboxylate solution resulted in a graduated reduction in biofilm formation in relation to the untreated control for

both clinical isolates: *Propionibacterium acnes* strain 18009 (clinical isolate), 59.3% viability of the untreated control at 24 hours; *Propionibacterium acnes* strain 5390 (clinical isolate), 63.1% viability of the untreated control at 24 hours (see Table 2).

Butyl Hydroxycyclohexane Carboxylate was effective at 1.0 v/v% in the inhibition of the biofilm formed by *Propionibacterium acnes* clinical isolates – 18009 and 5390. The cell viability of the biofilm was reduced by approximately 40% depending on the clinical isolate.

Butyl Hydroxycyclohexane Carboxylate decreased the growth of *Propionibacterium acnes* to a notable effect and hindered the formation of *Propionibacterium acnes* biofilm, most likely due to its comparable activity as a wetting agent. Butyl Hydroxycyclohexane Carboxylate may disrupt the adherence to cell surfaces and, thereby, help to reduce bacterial adhesion.

Rebalancing skin's microflora

The skin is a complex ecosystem on its own, about 1.8m² in size,

providing diverse habitats for a wide range of microorganisms. Many of the microorganisms are harmless or might even provide vital functions. A balanced microbiota is usually related to healthier skin. Disruptions in microbial populations due to external stress or lifestyle, can, therefore, be linked to cutaneous pathological states such as acne and atopic dermatitis. Modulating unbalanced populations and their interactions, between the microbiome and immune system, may prevent the risk of skin disorders,⁴ enabling a healthy and refined skin complexion.

Sebaceous sites are colonised mainly by *Propionibacteria* and *Staphylococci*, where the balance between *Staphylococcus epidermidis* and *Staphylococcus aureus* is of relevance. *Staphylococcus epidermidis* supports skin's own protective shield and keeps potentially pathogenic germs, like *Staphylococcus aureus*, under control by producing its own antimicrobial peptides.^{5,6}

To assess skin's microflora balancing properties, the growth reduction of *Staphylococcus epidermidis* and *Staphylococcus aureus* was evaluated. In addition, the adhesion reduction of the harmful bacteria *Staphylococcus aureus* was proven in an in vitro study on reconstructed human epidermis.

The growth reduction was tested with in vitro bacteria suspension assays and quantified by analysis of the remaining germ colonies. Bacteria suspensions comprising *Staphylococcus epidermidis* ATCC 12228 or *Staphylococcus aureus* ATCC 6538 were incubated aerobically at 35°C. The colony count of the bacteria suspensions was determined initially and after defined incubation times, 20 min, 60 min or 24 hours, and then expressed in CFU (Colony Forming Units) per mL. The studies were performed and compared to Zinc PCA.

Under the experimental conditions of the assay, Butyl Hydroxycyclohexane Carboxylate, tested at 0.5% and 1.0%, showed a slight time-dependent reduction effect on *Staphylococcus epidermidis* ATCC 12228. The bacteria count was reduced from 105 to 103 CFU

Time	P. acnes strain 18009 (clinical isolate)	P. acnes strain 5390 (clinical isolate)
	% Viability vs. untreated control	% Viability vs. untreated control
0h	104.0	102.4
1h	99.1	84.7
3h	95.9	79.8
8h	69.4	74.3
24h	59.3	63.1

Table 2: Biofilm viability of *Propionibacterium acnes* strain 18009 and strain 5390 compared to untreated control after application of Butyl Hydroxycyclohexane Carboxylate

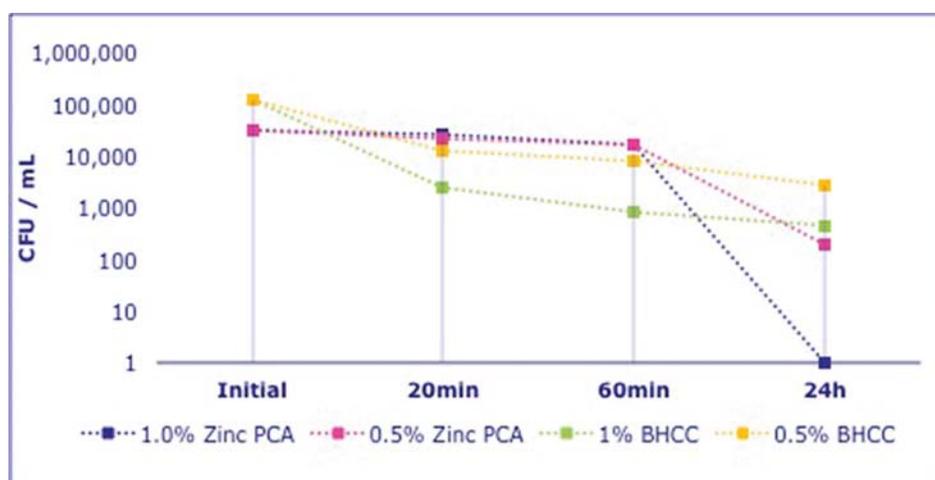


Figure 4: Growth reduction of *Staphylococcus epidermidis* ATCC 12228

/ mL. Meanwhile, Zinc PCA showed a reduction effect at 0.5% use level and a complete killing effect at 1.0% use level after 24 hours (Figure 4).

Butyl Hydroxycyclohexane Carboxylate affected only slightly the growth of *Staphylococcus epidermidis*, but reduced selectively, as shown above, the growth of *Propionibacterium acnes*. By comparison, Zinc PCA worked less selectively, killing both, *Propionibacterium acnes* and *Staphylococcus epidermidis*, at a use level of 1.0%.

Butyl Hydroxycyclohexane Carboxylate and Zinc PCA only marginally reduced *Staphylococcus aureus* growth. Bacteria count was reduced from 105 to 103 CFU / mL (BHCC) and from 105 to 102 CFU / mL (Zinc PCA) after 24 hours incubation (data not shown).

The adhesion reduction of the harmful bacteria *Staphylococcus aureus* was only tested with Butyl Hydroxycyclohexane Carboxylate. In this assay, the *Staphylococcus aureus* bacteria were radiolabeled by incubation with [3H]-adenine and the bacteria suspension was adjusted to 0.5 OD at 525 nm, which corresponds to a final bacteria count of 109 CFU / mL. Finally, Butyl Hydroxycyclohexane Carboxylate and radiolabeled bacteria

were topically applied on pre-treated and pre-incubated reconstructed human epidermis and incubated for 1 hour at 37°C. After incubation, the reconstructed human epidermis was washed and the remaining radioactivity, corresponding to the adherent bacteria, was measured by liquid scintillation counting.

Butyl Hydroxycyclohexane Carboxylate, tested at 1%, showed a moderate, but significant inhibitory effect on *Staphylococcus aureus* adhesion on reconstructed human epidermis. Butyl Hydroxycyclohexane Carboxylate reduced *Staphylococcus aureus* adhesion by 35%. However, tested at a lower concentration, Butyl Hydroxycyclohexane Carboxylate did not show any significant effect (Table 3).

Due to the fact that Butyl Hydroxycyclohexane Carboxylate could only slightly reduce the growth of *Staphylococcus aureus*, the observable adhesion reduction effect cannot be influenced by germ growth reduction. As a result, Butyl Hydroxycyclohexane Carboxylate may hinder the adhesion of non-beneficial germs. Butyl Hydroxycyclohexane Carboxylate may act similar to a wetting agent, thus may

affect the interfacial tension at cell walls and cell membranes of microorganisms. With this, Butyl Hydroxycyclohexane Carboxylate may disrupt the adherence to cell surfaces.

In contrast to Zinc PCA, Butyl Hydroxycyclohexane Carboxylate showed a significant effect reducing *Propionibacterium acnes* growth, whereas only slightly affecting *Staphylococcus epidermidis*. Additionally, Butyl Hydroxycyclohexane Carboxylate helped to reduce bacterial adhesion. Thus, Butyl Hydroxycyclohexane Carboxylate may support a healthy and beneficial skin microflora balance.

In vivo study

Finally, the oily-skin reducing, skin refining and anti-blemish properties of Butyl Hydroxycyclohexane Carboxylate has been assessed by an in vivo study. The randomised and blind in vivo study on acne prone skin, comprised 24 test subjects having an oily or combined skin type with a sebum level of at least 130µg/cm² and a skin inflammation score of at least 1, corresponding to slight irritation. The O/W emulsion, containing 1% Butyl Hydroxycyclohexane Carboxylate (verum – test emulsion), or no active ingredient (placebo – control emulsion), was applied twice a day on the whole face over 8 weeks.

Changes in sebum level were measured on the forehead using a Sebumeter® SM 815 (Courage + Khazaka electronic GmbH, Cologne, Germany). On the mentolabial area (area between the chin and lower lip) and/ or cheek, the follicular fluorescence was recorded and quantitatively evaluated using the Visiopor® PP34N camera (Courage + Khazaka electronic GmbH, Cologne, Germany). Skin inflammation and redness were documented via photography of the skin surface and evaluated by expert grading. In addition, the test subjects evaluated the efficacy by means of a questionnaire.

As illustrated in Figure 5, Butyl Hydroxycyclohexane Carboxylate reduced the skin surface sebum significantly. The sebum level, measured on the forehead, was significantly

Test compounds	Concentration	Inhibition	Standard deviation	Significance
		%	%	P
Control	-	0	5	-
BHCC	0.5%	9	11	Not significant p > 0.05
	1%	35	11	Significant p: 0.01 to 0.05

Table 3: Adhesion of *Staphylococcus aureus* onto reconstructed human epidermis

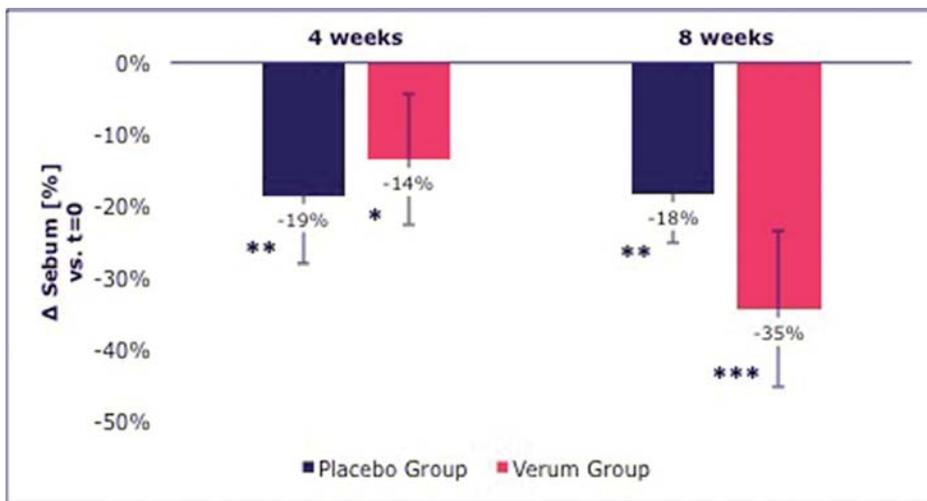


Figure 5: Reduction of surface sebum (Statistical evaluation according to Wilcoxon signed-rank test: p < 0.05 – significant, ** p < 0.01 – very significant, *** p < 0.001 – extremely significant)

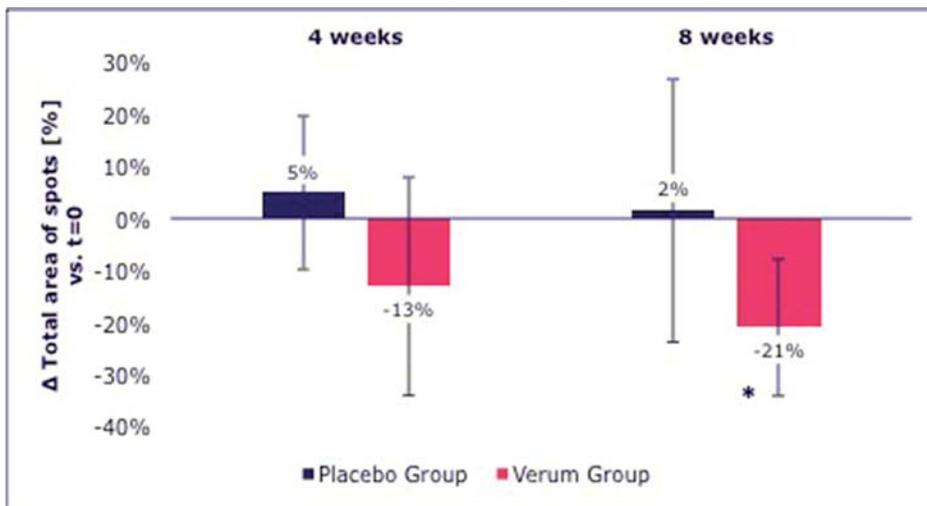


Figure 6: Reduction of bacterial porphyrins (Statistical evaluation according to Wilcoxon signed-rank test: p < 0.05 – significant, ** p < 0.01 – very significant, *** p < 0.001 – extremely significant)

reduced by 14% after 4 weeks, and by 35% after 8 weeks. The placebo formulation showed only a reduction of 19% after 4 and 8 weeks.

In addition, the total number and

the total area of spots were analysed by measuring follicular fluorescence. The total number of fluorescence spots showed no difference in comparison to initial measurements (data not

shown). Nevertheless, the total area of fluorescence spots against baseline was significantly reduced by 21% after 8 weeks of treatment with the test formulation (Figure 6).

The reduction of fluorescence area is also clearly visible on the following photographic documentation examples showing one test subject from each group. Photographs of the test subject of the control group showed no decrease in fluorescence area (Figure 7, a-c), while photographs of the test group showed a significant reduction (Figure 8, d-f).

Furthermore, the formulation containing Butyl Hydroxycyclohexane Carboxylate significantly reduced the skin inflammation/ redness score by 10% after 4 weeks, and by 23% after 8 weeks of treatment (Figure 9, over page).

Finally, in a self-assessment of efficacy parameters, the test subjects rated each of the illustrated parameters, on a 6 point scale (1 – very good to 6 – insufficient), see Figure 10 (over page). The verum group scored the efficacy parameters, related to an improved skin, consistently better compared to the placebo group.

The performed anti-blemish in vivo study confirmed that Butyl Hydroxycyclohexane Carboxylate is able to reduce the surface sebum level. The reduction effect of the placebo formulation can be explained by a change in behavior of test subjects when taking part in an in vivo study. The daily usage of a formulation may lead to positive influences on the skin. However, the observed effects of the test formulation are clearly caused by the active ingredient, as shown in the highly significant sebum reduction after 8 weeks and the colonisation decrease of *Propionibacterium acnes*. The development of inflammatory metabolites (porphyrins), produced by *Propionibacterium acnes*, was positively influenced in the verum group. Butyl Hydroxycyclohexane Carboxylate significantly reduced the porphyrin fluorescence area, which was confirmed by less visible inflammation signs. As a consequence, this may contribute to a refining of the pores.

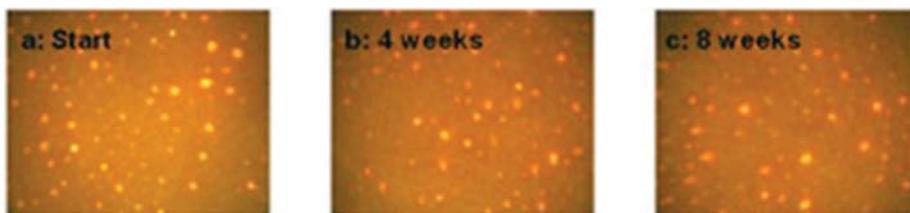


Figure 7: Photographic documentation of fluorescence of bacterial porphyrins: Effect of placebo emulsion – Control group (1 test subject)



Figure 8: Photographic documentation of fluorescence of bacterial porphyrins: Effect of test formulation – Test group (1 test subject)

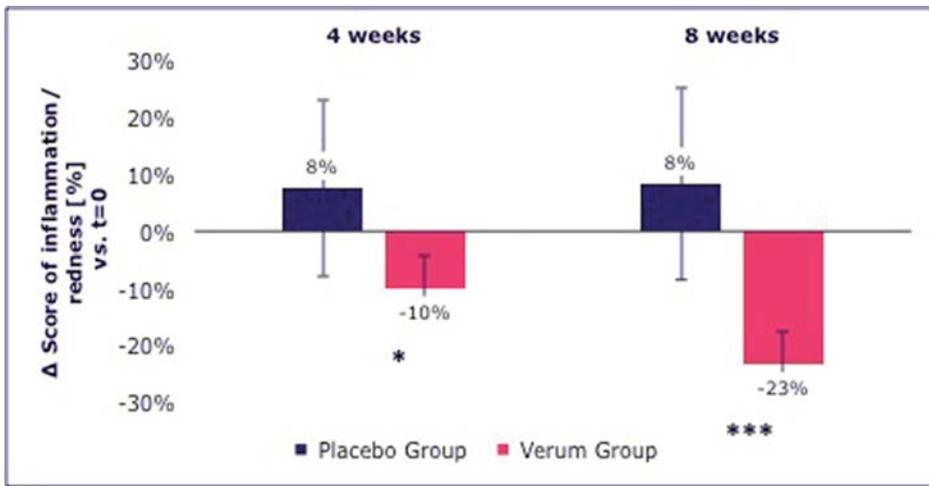


Figure 9: Skin inflammation/ redness score (Statistical evaluation according to Wilcoxon signed-rank test: p < 0.05 – significant, ** p < 0.01 – very significant, *** p < 0.001 – extremely significant)

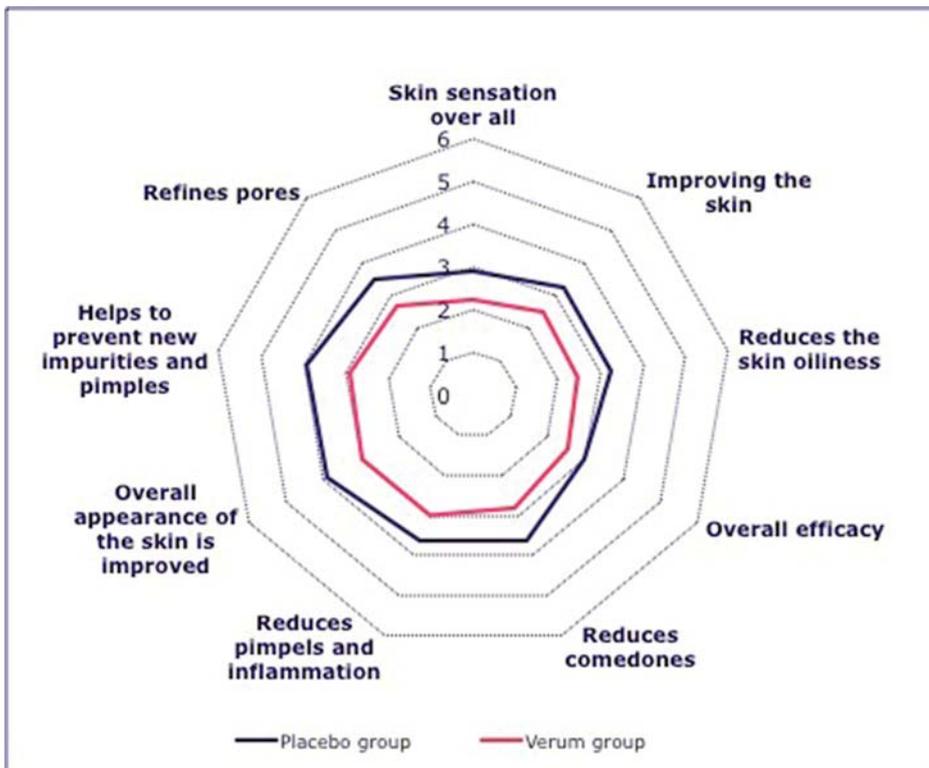


Figure 10: Comparison of self assessment of several efficacy parameters – placebo group vs. verum group – presented in spider web

Measured data, the statistical analysis and the self-assessment of test subjects, demonstrate the efficacy of the substance.

Conclusion

All three aspects of the three R's of Butyl Hydroxycyclohexane Carboxylate (RonaCare® SereneShield), regulating sebum, reduction of inflammation and rebalancing skin's microflora, have been proven on an *in vitro* and *in vivo* basis. As part of a daily skin care regimen, it can target oily and impure skin to remove shine. RonaCare® SereneShield can make skin less susceptible to acne,

strengthen the skin's defense system, clear up the overall appearance, and reduce irritation. Overall, a novel ingredient has been found with unique way of refining consumer's skin complexion leading towards a healthier and more aesthetic look. The result is a refined, healthy appearance.

References

- 1 Makrantonaki E *et al.* An update on the role of the sebaceous gland in the pathogenesis of acne, *Dermato-Endocrinology* 2011; 3 (1): 41-49
- 2 Smith KR, Thiboutot DM. Sebaceous gland lipids: friend or foe?, *Journal of Lipid Research* 2008; 49: 272-281

- 3 Beylot C, Auffret N *et al.* *Propionibacterium acnes*: an update on its role in the pathogenesis of acne, *Journal of European Academy of Dermatology and Venereology* 2014, 28: 271-278
- 4 Branco CT, Guimaraes JP. Modulation of skin microbiota by topical prebiotics, *Household and Personal Care Today* 2015, 10 (2): 21-27
- 5 Kong HH. Skin microbiome: genomics-based insights into the diversity and role of skin microbes, *Trends Mol Med.* 2011; 17 (6): 320-328
- 6 Gallo RL, Nakatsuji T. Microbial Symbiosis with the innate immune defense system of the skin, *Journal of Investigative Dermatology* 2011, 131 (10): 1974-1980



New Generation **HIFU** AMAZING **Non-Invasive** **MEDICAL** Face & Body Tightening



HIFU (High Intensity Focused Ultrasound) applies focused Ultrasound energy to a depth of 13mm locally targeting deeper tissues in the Superficial Muscular Aponeurotic System (SMAS), dermis and Subcutaneous tissue layers reinforcing new soft tissue. HIFU safely delivers visible skin tightening and lifting without invasive surgery and with no downtime.

- Non-Surgical Facelift**
- Non-Invasive**
- No Downtime**
- Speedy Procedure**
- Face & Body**
- Long Lasting Results**
- Tighten Loose Skin**
- Visible Improve Skin Texture**
- Portable**

Untouched Australian Results In Just 1 Session

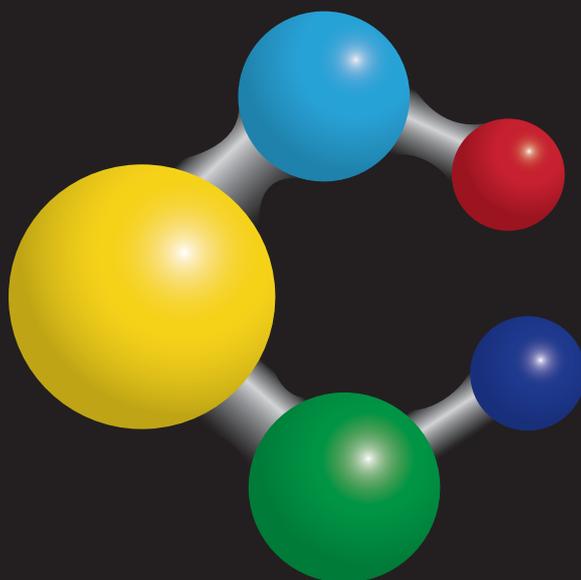


**E-CLIP+
HIFU**
High Intensity Focused Ultrasound

E-Clip+ HIFU™
T (02) 9009 6666
E info@aesthetictechnology.com.au
W www.hifuthrapy.com.au



AESTHETIC®
ADVANCED TECHNOLOGY PTY LTD
www.aesthetictechnology.com.au
C.E. MEDICAL
ARTG Listed : 278808



ceechem

PROUD GOLD SPONSORS OF ASCC 2017



APPROVED

FEATURING SPECIAL GUESTS:

NIKKOL[®]
Finding Solutions



COME AND SEE US AT STANDS 13 & 14

Contact
CEECHAM AUSTRALIA PTY LTD
www.cheechem.com.au

Paul: +61 (0) 422 029 770 paul.buckingham@ceechem.com.au
Shanky: +61 (0) 42 148 0805 shanky@ceechem.com.au
Pat: +61 (0) 418 645 539 patcarey@ceechem.com.au

