

the science of beauty



Vol 4 No 5

April 2015

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**editor's
note**

editorial

for the April issue of "The Science of Beauty"

Welcome to the April/Conference issue of the magazine. The main focus of this issue is the conference. After months of planning by the organising committee the conference is finally coming to fruition. The technical program has some excellent presentations which will be both interesting and educational and the social program will be a wonderful way to showcase our culture and meet up with old friends and make new ones.

Cairns is a great venue for this conference as it will give our Asian work colleagues a taste of what our beautiful country

has to offer and I am sure they will return home with a greater appreciation of Australia.

In this issue we are introducing a new section "Formulation Focus" and our first topic is skin whitening. I am sure you will enjoy it. If you would like to contribute to this section email myself joyh@ozemail.com.au or Margaret Smith marg@syndetworks.com.au.

Along with our usual contributors we have Carol Brunton a Patent Attorney who has written a very interesting article "Patenting Natural and Organic Cosmetics – Can it be done?". I am sure your will find

her article interesting.

Another interesting piece is a "tongue in cheek" article by Dr Malcolm Nearn entitled "Food for Thought". Those of us who know Malcolm as a rather serious academic find his satirical articles very clever and thought provoking. I am sure you will enjoy this "must read".

We have a great few days coming up at the conference and I am personally looking forward to catching up with all the friends I have made over the past twenty nine years and making new ones.

See you all in Cairns.

Joy Harrison

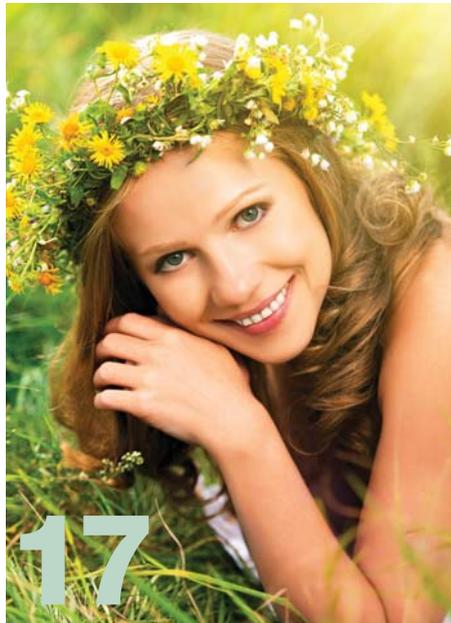
contents

Vol 4 No 5

April 2015

Business

- 9 **Nine Steps to Hiring the Right Person**
by Pam Stellema
- 13 **A Buyers Perspective**
by Lisa Della-Bosca
- 24 **Megatrends in Personal Care**
by Murray Hunter
- 26 **Success Story**
by Lydia Jordane



Wellness

- 17 **Protect Your Heart**
by Emma Sutherland
- 18 **RSI – Massage**
by Wendy Lockyear

Educational

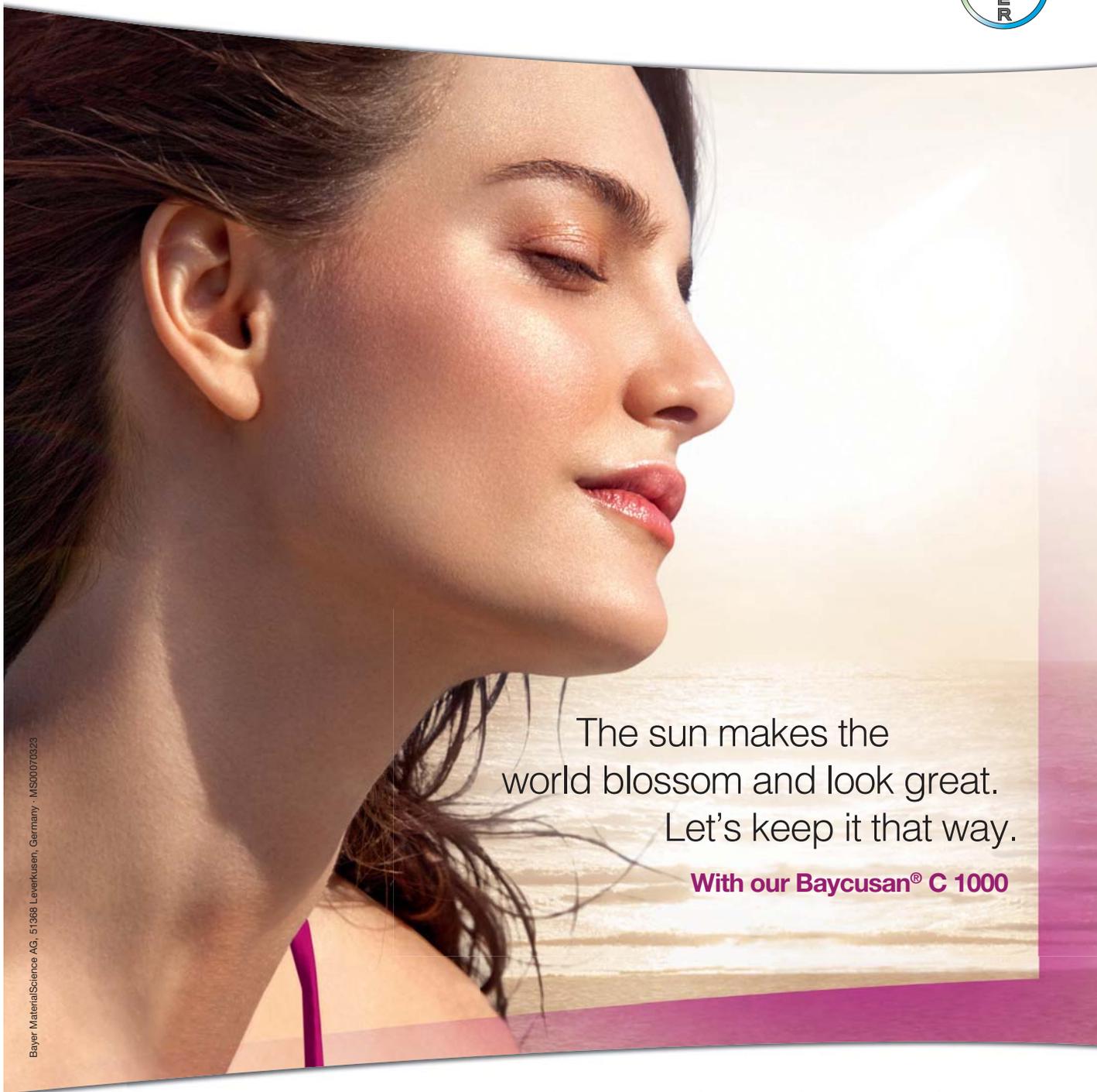
- 29 **Nanotechnology Benefits vs Risks**
by Tina Aspres
- 32 **Before and After**
by Emanuela Elia
- 38 **Formulation Focus**
by Margaret Smith
- 44 **P.S. How to Design Successful Cosmetics**
by Wendy Free
- 47 **Formulator's Forum**
by Ric Williams
- 51 **Sunscreen Highlights**
by John Staton



- 54 **Native Extracts**
by Lisa Carroll
- 60 **Food for Thought**
by Dr Malcolm Nearn
- 62 **Manufacturers Musings**
by Margaret Smith
- 66 **Patenting Natural and Organic Cosmetics**
by Carol Brunton

Advertisers

- 2 A S Harrison
- 5 Bayer
- 8 IMCD
- 10 Salon Savvy
- 11 Avenir
- 12 Bontoux
- 15 Dermatest
- 21 Brenntag
- 23 Axieo
- 25 Lycon
- 27 Ultraderm
- 31 CeeChem
- 37 Ingredients Plus
- 41 Concept Chemicals
- 42 Insurance Made Easy
- 43 Syndet Works
- 46 PCI
- 46 ALS Global
- 48 AMA Labs
- 53 Native Extracts
- 57 Merck
- 59 Lipotec
- 65 Akzo Nobel
- 68 Karpati



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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.

KITTIRAT YOTNANGRONG or Akoi as she is known, is one of the very few people who have been a Buddhist nun and a runner-up in the Miss Southern Thailand Beauty Quest as a "mature" contestant. She is a 'practical' vegetarian who believes in herbs, healthy living, and meditation. An avid yoga fanatic, Kittirat is also an organic farmer. She regularly speaks to community groups in Malaysia and Thailand on empowerment, health through herbs, and spirituality.



WENDY FREE has degrees in science (B.Sc) and Technology Management (M.Tech Mngt) and is an active member of a number of industry associations including Australian Society of Cosmetic Chemists, Australian Society of Microbiologists, Association of Therapeutic Goods Consultants, MediQ and is a Fellow of the Australian Organisation for Quality. With more than 2 decades industry experience, Wendy is currently the Scientific Director of Quality Matters Safety Matters Pty Ltd providing expertise in product and quality systems development, specifically for the medicines and personal care industries. She specialises in regulatory compliance, commercialisation, troubleshooting and GMP systems. Wendy has participated in the development and successful launch of hundreds of products, and is passionate about everything she does.

PAM STELLEMA is the Principal Coach and founder of SalonSavy, and provides specialised industry based phone coaching to her clients. Pam has owned and operated several highly successful salons, and specialises in maximising salon productivity and profits. She has also authored the book "3 1/2 Secrets to Salon Success"

Pam can be contacted via her website www.SalonSavy.com.au or phone 011 617 5529 6467 or 0431 975 515.



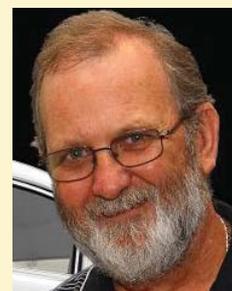
JOHN STATON has a background of over 40 years experience in the pharmaceutical and healthcare industries. John is a life member of the ASCC and serves in a number of industry representative roles with ASMI, ACCORD, TGA and Standards. He is the Australian representative to the ISO Committee on Sunscreen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



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.

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.



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



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.

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.



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!



MURRAY HUNTER has been involved in Asia-Pacific business for the last 30 years as an entrepreneur, consultant, academic, and researcher. His first venture into the personal care industry was a joint venture with the Andrew Jergens Company in Australia in the late 1970s, later setting up a manufacturing plant, and marketing operation in Indonesia during the early 1980s. As an entrepreneur he was involved in numerous start-ups, developing a lot of patented technology, where one of his enterprises was listed as the 5th fastest

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.



going company on the BRW/Price Waterhouse Fast100 list in 1992 in Australia. Murray is now an associate professor at the University Malaysia Perlis, spending a lot of time consulting to Asian governments on community development and village biotechnology, both at the strategic level and "on the ground". He is a visiting professor at a number of universities and regular speaker at conferences and workshops in the region. Murray is the author of a number of books, numerous research and conceptual papers in referred journals, and commentator on the issues of personal care, psychology, entrepreneurship and development in a number of magazines and online news sites around the world.



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Value through expertise



9 steps to hiring the right person every time

One of the biggest problems that many industries face, including the beauty industry, is employee turnover.

When you consider the cost of advertising, recruiting, training, and development of a new employee, you can certainly see why minimising employee replacement is a great idea.

To avoid this additional expense in your salon, you need to recruit using proven strategies to help you select the right person the *first time around*.

While you may not be able to prevent employees from leaving altogether, by following some very straightforward steps, you can minimise employee loss, and retain your employees for much longer periods of time.

Let's look at some of the key factors that will help you to achieve that.

The Recruitment Process

Without a doubt, this is *the* most important part of getting and keeping great employees.

A major mistake made by many is the lack of sufficient research done on an applicant before hiring. This lack of research often leads to a bad hire, which in turn then leads to the recruitment process starting over again.

Let's start at the beginning.

#1. The Job Description

Lots of employers don't bother to create a Job Description. They assume that they know what they want without having to think things through or write anything down. This is a mistake.

The fact is that the Job Description is not just about what you know or want, it's also a valuable document for the applicant, so that *they* know exactly what they are signing up for when they take a job in your salon.

When a new employee finds out that the job is not what they expected it to be, then it won't be long until they are job hunting once again, leaving you with yet another position to recruit for.

Also, the Job Description is an important document that you can refer back to if there's ever a dispute about what the job entails. If you've written your expectations and offer clearly and concisely in a Job Description, there'll never be any confusion later on.

#2. The Job Advertisement

The Job Advertisement needs to be crystal clear about qualifications, knowledge, and skills that your applicant must have. It's pointless getting dozens of unsuitable applicants for the position, which is what will happen if you're not



by Pam Stellema

completely clear about these minimum requirements.

It also provides an opportunity for you to showcase what your salon has to offer a successful applicant. When you do this, it may help a prospective applicant make the choice to apply for your position over another one.

#3. The Phone Interview

A well prepared short phone interview will save you from inadvertently inviting an unsuitable applicant in for an interview. This pre-interview process will save you hours of valuable time.

Prepare for your phone interviews by creating a list of questions based on your knowledge of what's required of the applicant. Not only will you confirm

that the applicant meets all the must-have requirements, but you can also check on other essentials such as their proximity to the salon, transport options, work-time restrictions, and anything else you believe might hinder them from doing the job on offer.

A few short minutes on the phone with all your applicants will ensure only the qualified few make it through to a face to face interview.

#4. The Job Application

A resume is not a worthy substitute for a completed Job Application.

Resumes can so easily deceive prospective employers with what they *don't include*. This is why you should always use an in-depth Job Application form – one that will give you as much information as possible on which to base your hiring decision.

Make sure that your Job Application is designed to address the specific requirements of your salon and the job offered.

For instance, in the beauty industry, you would normally need to know the following, at the very minimum:

- that the applicant is fully qualified
- that the applicant has the legal right to work in Australia
- how many hours per week the applicant requires to earn sufficient money to live on
- how much hands-on experience the applicant has within the industry
- how recent her industry experience is
- if the applicant has any postgraduate qualifications showing additional skills
- if the applicant is willing to attend on and off the job training
- where, and for how long, the applicant has been employed in previous positions
- when the applicant is not available to work (holidays, evenings, weekends)
- if the applicant is engaged in any recreational activities that will interfere with her job
- if the applicant has any previous injuries that would prevent her from

doing the job on offer

There are lots of important points to consider when designing your application form, so if you don't have a comprehensive one already, make the time to create one.

#5. The Job Interview

As most salon owners don't have any formal qualifications in Human Resources, there's a good chance that they don't get enough quality information from their applicants during the interview process.

In fact, one of the major problems is that the person doing the interview often does most of the talking, when of course it should be the *other way around*.

During an interview, you should use the completed Job Application form provided by the applicant, to supply you with topics for discussion.

By getting the applicant to open up and do most of the talking, you'll gain a much better insight into their suitability.

During the Job Interview is not the right time to be 'selling' your salon to the applicant, so avoid the temptation to do this. Instead use the time to gather as much information as you can about your applicant, so that you're sure to make the right hiring decision.

#6. The Second Interview

After you've completed your initial round of interviews and selected a smaller number of suitable candidates for the job, it's worthwhile asking them back for a second, more relaxed interview.

Usually, the applicant will have lost some nervousness by the second interview, and if left to speak without undue interruptions, will reveal a lot more about themselves (sometimes not intentionally).

The second interview can also be a good time to ask a manager to sit in, providing you with the benefit of valuable input from someone else who knows the needs of your salon.

#7. Reference Checks

Employers who don't bother with this step often regret it. Past employers can be a wealth of information about your



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applicant – *even if they say nothing at all.*

I've always found that past employers who don't want to give a reference of any kind, do so because they don't want to say something negative, and possibly get themselves into trouble.

When this happened to me (and it did many times), I simply asked, "Would you re-employ this person in your salon?" I usually got the answer I expected.

#8. Skills Assessment

Sometimes applicants look fantastic on paper and interview well, but are hopelessly incapable when it comes to hands-on skills. But you won't find this out until you've given them a comprehensive skills assessment.

Don't be put off by the fact that you have to pay the applicant for their time, because in the big picture, this is really a very small investment to ensure you don't end up employing the wrong person.

When you think about the amount of



Attitude is a little thing that makes a big difference.

Winston S. Churchill



money you may lose through unhappy clients who leave your salon for greener pastures, you will realise that it wasn't worth the money you thought you were saving at the time.

Sometimes, even after placing the best advertisement and interviewing many candidates, you still won't have found the right person for the job. Don't be tempted to hire the "best of a bad bunch". This is a mistake that will bring regrets in most cases.

#9. Attitude

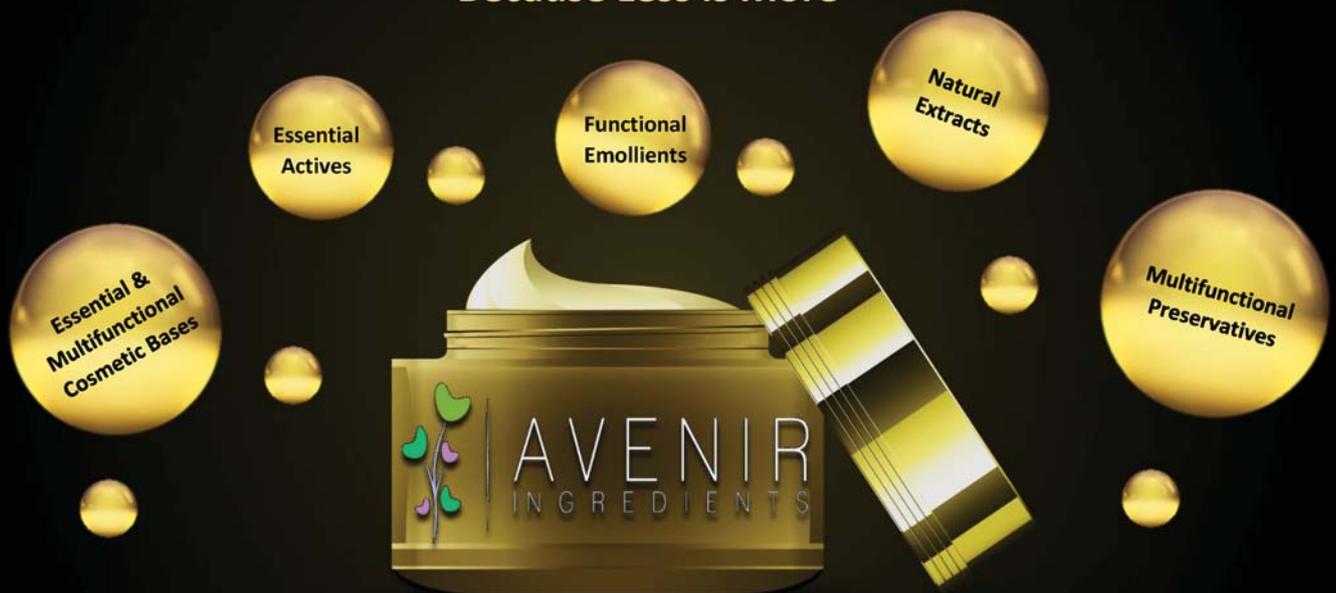
It's far better to hire someone who has real potential with regard to their skills, but also possesses a terrific attitude toward the things that matter to you as a

salon owner.

Someone who loves being around other people, looks for the good in others before the bad, sees potential instead of problems, loves working in a team environment, and can always find a genuine smile. Your clients will love this person, and forgive them some imperfections.

Always keep in mind that additional skills can be taught or upgraded, but attitude seldom changes.

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Skin, Ingredients, Formulations, Integrity and Proof

A buyer's perspective!

Thru an Educators Eyes!

by Lisa Della-Bosca



What is the difference between a cosmetic product, a pharmacy skin product, a supermarket beauty product, a clinical product and treatment, a beauty salon product and treatment, a Cosmeceutical product and treatment, an internet skin product, a party plan multi-level marketing product and a homemade kitchen organic cosmetic?

Confusion abounds for the consumer and even the savvy consumer has no idea of the benefits of certain formulations, compared to certain percentages, transport vehicles, encapsulation methods and stabilisation methods.

Yet we are speaking of a multibillion dollar industry!

As we move ahead in the next 5 years and the world will continue to spend Beauty Dollars to the now burgeoning amount of around \$170-180 billion where does this leave the consumer and those operating within the professional parameters of the "Beauty Industry", "The Skin and Dermal Therapy Industry", "the Cosmeceutical Industry", and the Cosmetic Medicine Industry.

The top 10 brands as listed by Forbes

magazine include Brands that market soap, make-up, general slogans and bi-lines to attract the consumer, and these include the multi-level marketing gurus, the Department Store glamour attraction, and the supermarket brands.

The Savvy Consumer and Practitioner are in search of Education that will validate their needs, research that is accessible and written in easy to understand science speak, and validated ingredients and formulations allowing skin concerns to have treatment without damage. While still being relatively affordable to the average person in this economic climate.

The Education is at present given by those selling their goods and wares. In the professional realm this can may be authentic and genuine. But how do we know?

The use of a little science to allow the unsuspecting professional or consumer believe the by-line it must be good or the inclusion of free training (as we see with some high end equipment companies) can bring this industry tumbling down hard and fast!

Is it time to have an all-inclusive collaboration between the Researchers, the Scientists, the Chemists, the Skin and Dermal Therapist, the Medical Practitioners, and the Government bodies related to Health and Education so we may have ethical information, ethical standards, radical change and a more holistic approach to Skin and the allied health areas in general.

After all Skin is the largest organ of the body, but it is largely ignored. In Australia we have the highest rate of Skin Cancer and Melanoma in the world and the only method of treatment is removal and sun protection!

This is all very good and necessary,

but with so much research that tells us we can increase the immunity of the skin, we could assist in making this large organ healthier in the most general of terms, why is this not shouted from the highest level of authority?

Looking at statistics for just the Australian market today, this is a 4 billion dollar industry. We have 81,453 employed in this industry, over 21,777 businesses and at present an annual growth of between .9% -1.6% depending on which report is viewed.

There is an increasing trend to visit spas and skin clinics for both a relaxation time out treatment and for the more therapeutic and wellness aspects of skin and body therapy as we see in European culture where these treatments are considered a hygiene not a luxury.

Men's expenditure has increased over the past 20 year and this area has given the industry an economic boost even during the recent economic crisis.

We now estimate over 700 Spa's in Australia offering a variety of treatments from the pampering, feel good services and treatments to the very high end health and wellness area, of which there are only a few.

The future of the pampering and feel good only product is seen to become increasingly obsolete.

While the Cosmeceutical and Wellness area is seen an area of functioning ingredients and services. It is estimated the Anti-Age area alone in the future will be worth over \$30 billion.

Other predicted trends are the customised tailored treatments for solutions and results, oriented to the therapist and clinic able to offer the vast array of services required to achieve goals and outcomes. These practitioners will be highly skilled and have studied numerous modalities with exceptional skills in communication and client / patient relationships.

While the detox area has seen the numerous marketing ploys to engage consumer attention, from the lemon detox, the 24 hour detox, the 48 hour detox, the market is has set a trend for society to identify the need to negotiate

with body toxicity and the many responsible ways of managing this issue. Spa trends overseas show the scene set for the many practitioners that are suitable for the Medi Spa and therapy area to enable the general public to access the types of treatment regimens and programs required to keep ahead of illness and ageing.

While recommendation is still the best marketing it is now considered more important than celebrity marketing and endorsement, according to 58% of the groups surveyed.

Successful marketing has switched now more than ever, including sampling, free or low cost sample treatments, loyalty and referral programs all in the name of luring the consumer from another brand.

We are warned: 'Beware of the consumer backlash' now being faced by the tobacco and food industries for all the marketing and misdirection used to sell their products. This consists of two major areas

- 1 Truth in Advertising – we do see cosmetics making extremely extravagant marketing assertions
- 2 The Moral dimension where the beauty and associated industries can make permeant changes to an individual such as scarring, cosmetic procedures gone wrong, permanent changes, are not simply a pamper any longer.

Before this article becomes a total statistical bore, the aim is to once again point out the necessity of opening the doors to the associated industry stake holders to ensure leadership in education, ethics, ongoing professionalism, associated links between one side of the coin and the other.

- For Example why do we not have the skin scientists speaking to the skin therapists and the general public?
- or the nutritionists connecting with the dermal therapists to advise on skin health from the inside;
 - Or the acupuncturist to provide acupuncture face lifts, an alternative to the injectable paralysis developed from botulism;
 - The massage therapist to provide

treatment for lymphedema and associated problems

- The medical professional to engage with all of the above.
The list goes on...

If you have made it through the statistical swath of information and agree with the purpose of this article, please join with me and many others in forging ahead to make changes to legislation and the future of education and the right for the therapist, practitioners and consumer to be fully educated and informed for all areas of their health, wellbeing, beauty and skin needs.

A proposal for a council or a fellowship to be formed and to have access to government departments for the advisement of safety and a healthy future for all those passionate about their industry. This could also lead an educational symposium for all those associated with the industry and an educational forum that is based on science and research rather than marketing and promises.

Please contact Lisa through The Science of Beauty Journal

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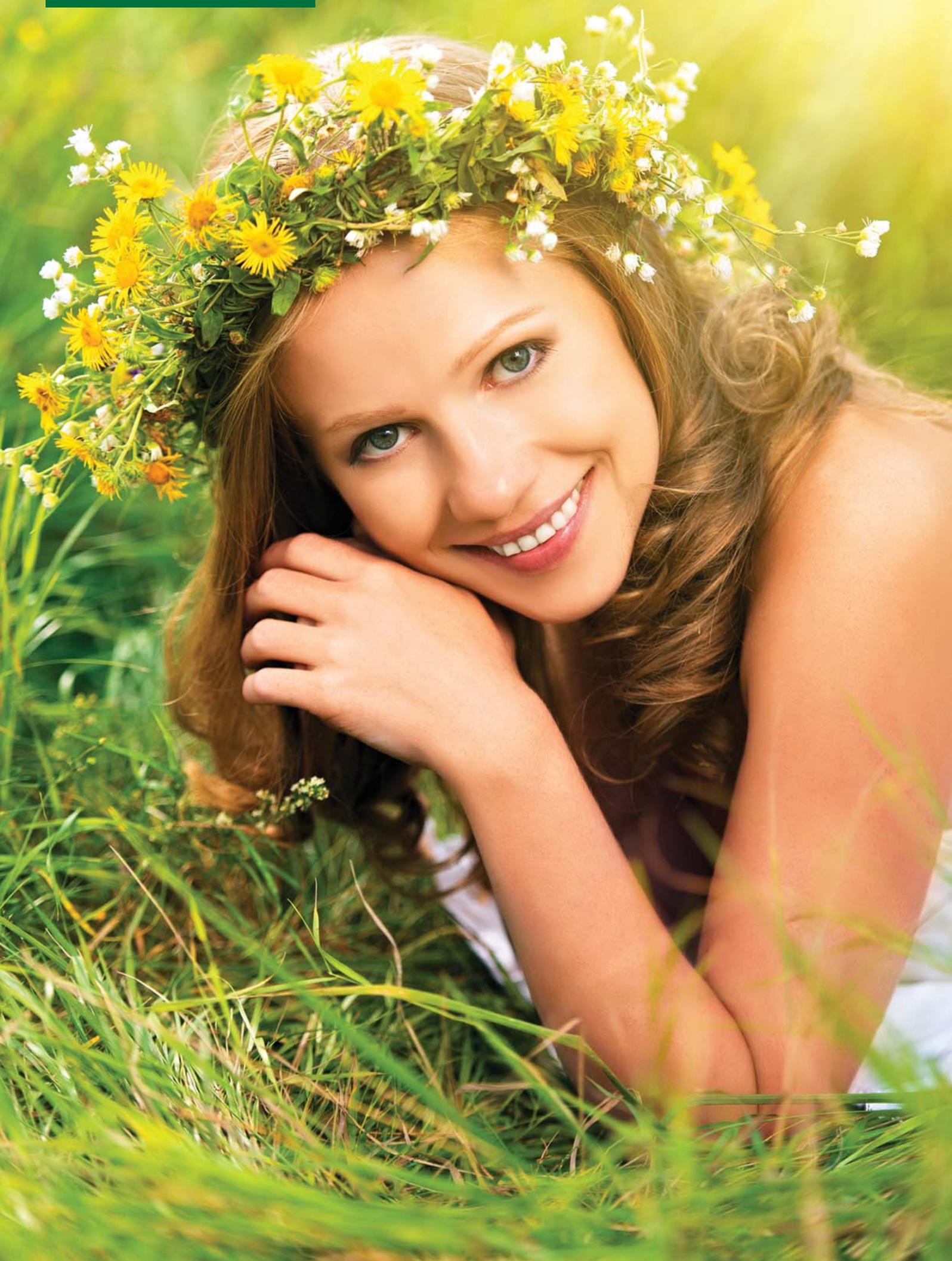
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Protect your Heart

An interesting study looked at over 32,000 people and analyzed their diets. In a 10-year follow up, the researchers documented the rates of heart attack and then assessed the people's diets to work out any links between the two. What they discovered is that people who ate seven serves of fruit and vegetables a day were 20% less likely to have a heart attack than people who ate 2.5 serves per day.

If you want to target heart health, research has highlighted the benefits of both apples and spinach. Both increase blood levels of nitric oxide, an important molecule for cardiovascular and cognitive health. It relaxes blood vessels and improves blood flow.

Did you know that eating beetroot actually improves running performance! Beetroot also increases nitric oxide and it is thought that improved oxygenation helps to reduce lactic acid in muscle cells.

My clients often ask me how many serves of fruits and vegetables they should be eating. The Australian Government Guidelines recommend two fruit and five vegetables. According to research

from the Australian Bureau of Statistics, only 9.5% of Australians eat five serves of veggies every day!

Increase your vegetable intake by:

- 1 Making sure your fridge is stocked - you can't eat them if they aren't there!
- 2 Pre chop vegetables and store in the fridge - it makes it easier to throw together a veggie rich meal if the prep work is done
- 3 Making an omelette with a selection of zucchini, spinach, red capsicum, mushrooms, tomatoes
- 4 Add grated vegetables into sauces, curries and casseroles
- 5 Have a green salad every night alongside your dinner
- 6 Make a vegetable soup - an easy way to get a huge hit of your vegetable intake

Serving sizes:

Vegetables - ½ cup cooked vegetables or 1 cup salad vegetables

Fruit - one medium piece, two small pieces, one cup diced fruit



by Emma Sutherland

References

- 1 <http://www.ncbi.nlm.nih.gov/pubmed/22998880>
- 2 <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/D8A0182B96B03DE7CA257AA30014BF34>
- 3 <http://www.ncbi.nlm.nih.gov/pubmed/24676365>
- 4 <http://www.ncbi.nlm.nih.gov/pubmed/22709704>

RSI

muscle therapy self care maintenance and massage

by Wendy Lockyear

Part 2

Exercises for the relief of repetitive strain injury conditions for therapists and their clients



This article follows on from the previous February issue, No 4, and is a maintenance program. Using specific Massage techniques for prevention of RSI and to stabilise an existing chronic condition, which will enable the person to continue with normal activities.

Twelve-Step Method At A Glance

1. Posture correction
2. Grip strength assessment of the hand
3. Neck massage
4. Forward arm extension
5. Lateral arm extension
6. Wrist press
7. Wrist pull
8. Wrist squeeze
9. Finger pull
10. Upper back stretch
11. Shoulder, chest, and elbow stretch
12. Muscle therapy

Now you are ready for Step 12

Once you've done all the previous corrective techniques (steps 1 to 11) from the previous issue, you can do this routine throughout your day, as often as you need to maintain structural alignment, nerve integrity, and relaxed muscles. The next corrective technique involves therapeutic muscle therapy. To relieve pain and tightness in your muscles and restore their health, flexibility, and function, you need to massage the muscles that are repeatedly overstrained and overworked. This requires a bit more time than the other steps, but you can do it before you go to work, on your lunch break, or when you get home.

First of all, reassess your perceived grip strength as per Step 2. Secondly, find a comfortable place to sit. Relax and breathe easily. Take a very small amount of a healing oil or lotion, such as arnica oil, sesame oil, jojoba, aloe lotion, olive oil or any Sports Balm. Spread it on your forearm, top and bottom, and into your hand.

All of the following steps should be done on one arm at a time. Once you have completed muscle therapy on the first arm, move to the other arm and repeat the entire series on it.

If you have had surgery, you will want to massage that area gently but firmly, gradually working deeper. If it is painful, massage a bit more lightly. Doing this several times a day speeds the healing process and recovery time. Even if it has been many years since surgery, this therapy still works.

Muscle Therapy Strokes

There are three strokes used in working the muscles of the arms and hands: cross-fiber, broad cross-fiber, and flushing. Here's a brief explanation.

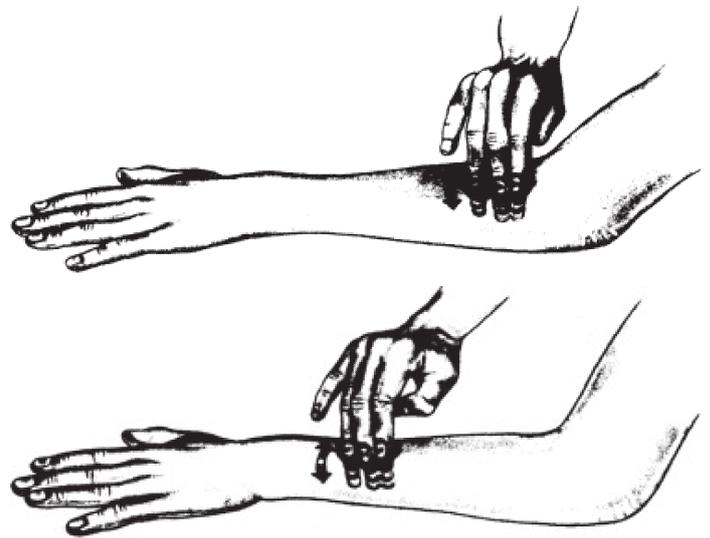
Cross-fiber. Use the pads of your fingers to press gently down into the muscle, then apply gentle but firm pressure across a muscle or tendon at a right angle. You move the muscle back and forth in a sawing motion across the muscle fiber.

Broad cross-fiber. Use your thumb to press gently but firmly into the muscle, and make a broad sweeping motion across the grain of the muscle fibers. You are still moving across the muscle grain, but in a sweeping motion rather than moving the muscle in one spot.

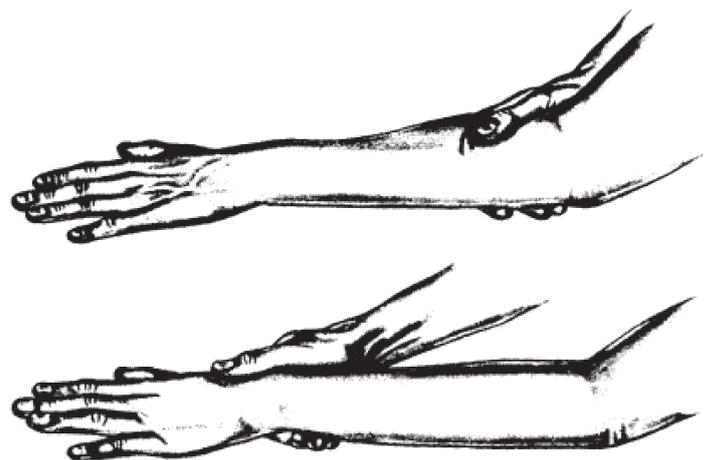
Flushing: This type of stroke is also called effleurage. It helps flush waste products in the muscle out through the lymphatic system. Use your forearm in long gliding strokes, always toward your heart.

Backside of the Arm and Hand

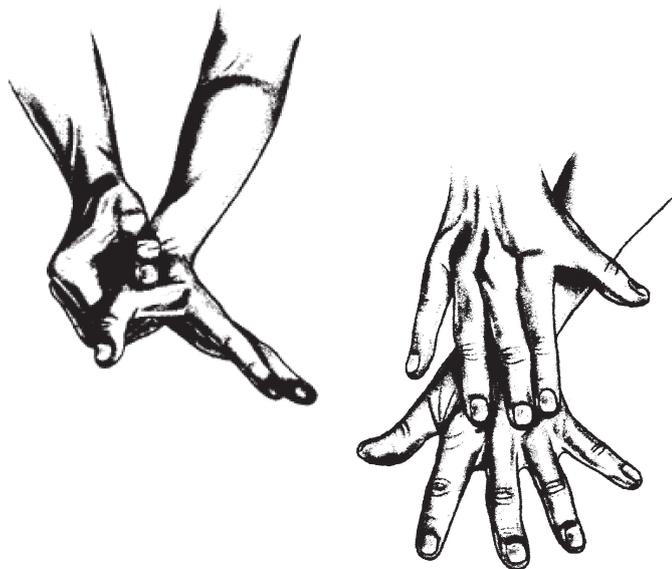
Begin on your upper forearm, palm side down, at the elbow joint. Use the cross-fiber stroke to "unweave" the painful trigger points, spasms, and knots in the muscle. With the pads of your fingers, press gently but firmly down into the muscle and move the muscle back and forth, in a sawing motion, across the muscle fibers. You will be able to feel the ropiness in your muscles. Use this stroke in small areas as you work the forearm muscles. Move down your forearm as shown, until you have done the whole arm. Repeat three times.



Now use the broad cross-fiber stroke to spread the fibers of the muscle to increase blood circulation. With your thumb, press gently but firmly into the muscle and make a broad sweeping motion across the grain of the muscle fibers. Work all the way down to the wrist and back up to your elbow three times, or as much as needed.



Continue by working the muscles on the top of your hand, as shown, moving into the web of your thumb and fingers. Work on the muscles as much as needed.

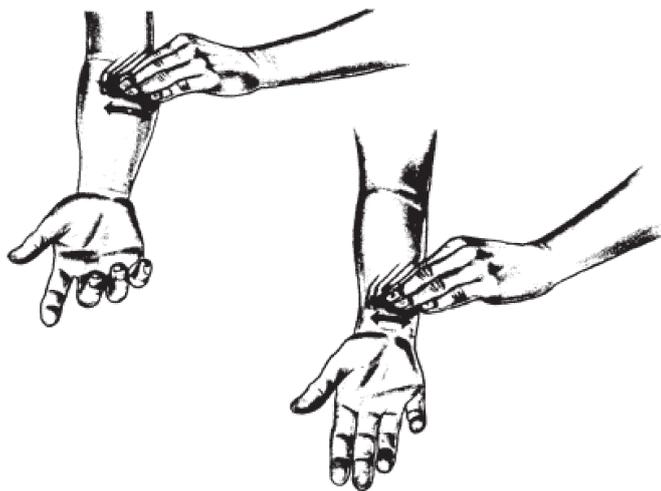


Finally, using your opposite forearm as a tool, gently but firmly press into the arm muscles and push up the forearm (toward your heart). This helps flush the waste products into the lymphatic system and out of the muscles.

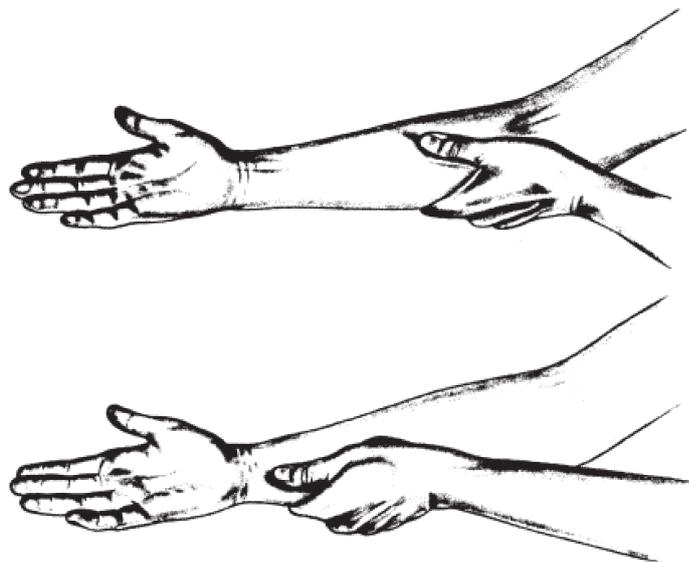


Underside of the Arm

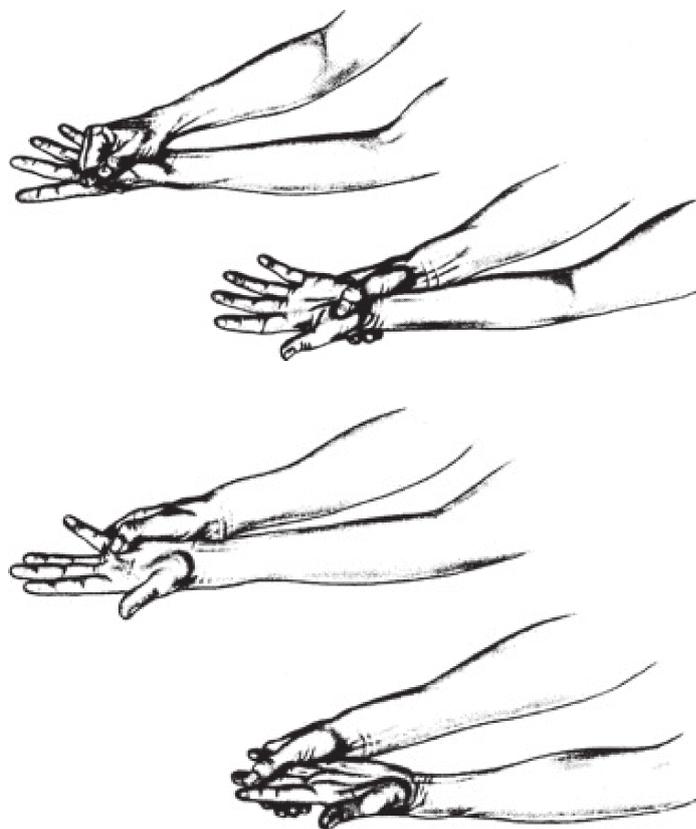
Begin at your elbow joint with a cross-fiber stroke. With the pads of your fingers, press firmly down into the muscle and move your fingers back and forth across the muscle fibers in a sawing motion. You will be able to feel the ropiness in your muscles. Work all the way down to your wrist. Repeat three times, or as much as needed.



Use the broad cross-fiber stroke to spread the fibers of the muscle to increase blood circulation. With your thumb, press firmly into the muscle and make a broad sweeping motion across the muscles as shown below. Begin at the elbow joint, work all the way down to the wrist and then back up to the elbow. Massage your arm three times, or as much as needed.



Continue to work the muscles in the palm of your hand into the pad of your thumb and fingers. Work on the muscles around the joints of the fingers and then give a gentle pull on each finger to open up the joint. Work on the hand muscles as much as needed. Remember to grasp the fingers at the point where they attach to the hand.



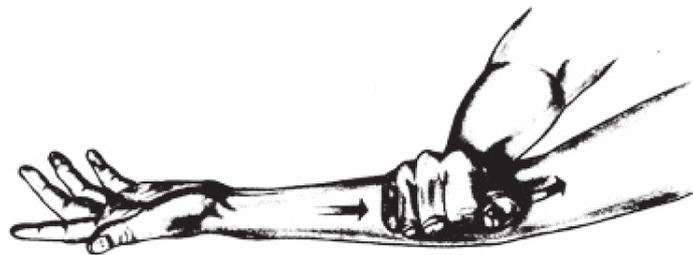
The Elbow

Many people get tendinitis or inflammation of the tendon, sometimes called tennis elbow. Massaging the tendons and muscles around the joints will help decrease the inflammation and soreness. Massage your elbow as shown below, and work both the extensor and flexor muscles in the upper arm (your triceps and your biceps). Remember to align your elbow joint, doing the forward arm extension and lateral arm extension as per steps 4 and 5 as described in the previous issue. This will remove tension from your joints. Gently massage around your elbow joints, and feel the bones of your elbow and tendon attachments. Where you feel soreness, use gentle cross-fiber and broad cross-fiber strokes.



To finish, use your upper forearm as a tool to gently but firmly press into your arm muscles and press up your forearm toward your heart. This helps flush the waste products into the lymphatic system and out of the muscles. Repeat three times, or as much as needed.

Once you have completed these steps on one arm, begin again on the other arm and repeat the entire series.



Contact Wendy Lockyear
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Megatrends in personal care

by Murray Hunter



Perhaps April with the Annual ASCC Conference coming up, it is a good time of year to ponder about some of the underlying megatrends that will shape the personal care industry in the future. This is a highly speculative task, and bound to draw criticism and dismay from some. It's only one person's opinion, based on a subjective assessment, using observation and experience as data.

Even John Naisbitt's "Megatrends" was low on accuracy, but here goes:

Megatrends shape an industry in certain directions which give it particular characteristics and form.

I will speculate on some of these formers.

The writer sees four major megatrends that can't be ignored; One is **centralisation**, the second is paradoxically, **diversity**, (you guessed it!), the third is **sustainability**, and forth is the **Halal phenomenon**.

These broad headings cover numerous other trends which the author will seek to identify in the rest of this article.

1. Centralisation of the industry

The personal care industry has been

becoming **more centralised over the last three and a half decades**.

This has been at the **retail level** where major supermarket, pharmacy, and department store chains have been buying up the opposition to where there remain only a few major retailers around the world today. Likewise the major **multinational manufacturers** have been buying up competitors and other companies which have shown potential, to the point where there are only around a half dozen major personal care manufacturers around today. And for various reasons such as the smaller number of personal care manufacturers and stiffening regulation, the number of **raw material manufacturers and traders** has also shrunk.

We are also seeing **geographic shifts in production** where many of the world's chemicals are now produced in **China**. Major multinational personal care manufacturers prefer to **produce centrally in regional** hubs like China, Vietnam, India, and Brazil, exporting to smaller markets, where possible.

Regulatory compliance costs are so high in most markets, that only

the large and wealthy companies can afford to operate anymore. Research & Development is now extremely expensive, and material and product registration costs are so high, formal R&D today is left only to the large players, who can afford the costs.

Thus in the author's opinion, **the industry has lost its soul**, where it is run by MBA type managers who don't necessarily reside in the markets they make decisions for. What happens in the Australian market will most often be based on a decision by someone with less than five years experience in it, from a place like Singapore, Hong Kong, China, or the UK.

Retailers now **commoditise the market** through planogram collaboration with their industry

partners. When a new or innovative personal care manufacturer wants to get shelf space in a major chain, most often, it's one of the opposition companies that plays a role in the decision. A **conflict of interest** that no statutory regulatory body has attempted to make fair. This has become an almost insurmountable barrier for the small manufacturer today.

Finally, there is going to be a continued polarisation over the next few years of those consumers who will seek out brands in the developing markets led by China, and those consumers who has become **brand fatigued** in many post industrial markets.

2. Diversity

As the author said in the introduction, there will also be a paradoxical movement towards the industry becoming more diverse in certain places. In the developed markets, this will come from a **brand revolt**. The brand revolt will favor both **generics** and **boutique products**, with consumers going either way.

Multinationals are on guard of this and will snap up any young company that makes its presence felt in the industry. Watch this space for **more takeovers**.

But the **hobbyists are alive and well** in the US and building boutique products which have a niche of loyal customers. Likewise in parts of Asia, in Thailand, China, India, and further afar, many small manufacturers are **producing herbal themed** products which develop very **strong local consumer followings**. There will be a rise of **lifestyle, ethnic, and cultural branding** that will have a great impact upon the personal care market in the near future, of which one in particular will be discussed in the final megatrend.

Look for **new business models** and **massive franchising** in the future. As retailers centralise, **direct marketing** will also grow and flourish.

3. Sustainability

Perhaps the word 'sustainability' has been the **most deceptively misused**

word in the English language. The concept of sustainability is quickly widening to encompass **ethical practices**. People will look much more closely at who is making the products and why, than ever before.

Products, processes, and materials must meet the perception of being sustainable. Any weakness by a firm in this area will be punished severely. However this area will still be the centre-ground of 'smoke and mirror' approaches by many firms who have contempt for the issue and their consumers.

Expect high standards in this area over the next decade.

4. The Halal Phenomenon

The author believes that the Halal phenomenon will probably be the most certain and influential megatrend

impacting upon the personal care industry over the next decade. Muslim consumers are more aware of their spiritual responsibilities and Halal products will become a paramount aspect of their consumption practices. Halal is mistakenly considered by most as being a certification system. It's much more than that, it's a whole philosophy and ethical code of conduct a firm must follow in order to meet both **worldly and spiritual commitments**. The author believes that "**Halal is for all consumers**" and most companies will have to incorporate many of these practices into their companies to satisfy consumers.

As you listen to the presentations over the next couple of days, please keep these potential megatrends in consideration, particularly how they will affect you.

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getting the right policy for your business

by James Gillard

A phone inquiry came through one morning from one of our cosmetic-manufacturing clients who was about to run a “clinical trial,” testing a new version of his existing product. “Does my existing insurance policy cover me?” Fortunately, he made that phone call. Yes, he needed additional insurance cover for the clinical trial.

If you are in the cosmetic, complementary health, or health related business industry, you know what I am talking about. A clinical trial refers to a period of product testing when you test your product to ensure your product is safe and effective. Whether you are formulator, manufacturer, or a sponsor of the product, you need insurance cover.

There are underwriters who specialise in cosmetic products and complementary health policies for various insurances: Product liability, Public liability, Property, and Business Interruption Insurances.

Product liability Insurance protects you and your business from financial loss caused by negligence resulting in injury from adverse reactions to your product e.g. skin care products.

At the clinical trial period when

you are testing your product, a full cover for product liability is strongly recommended. The policy usually covers a 12-month period and will be reviewed once the trial is completed or the insurance is due for renewal whichever occurs first. The premium and covers will vary according to the type of product(s) that are being tested. Take professional insurance advice from your insurance broker before starting any testing or trials.

At the manufacturing stage, your contracted manufacturer will have product liability to cover all products that they manufacture however you still require cover for liability as a retail, wholesale distributor or sponsor. Cover can be arranged for both in Australia and overseas distribution.

Public liability Insurance protects your business against financial loss due to a claim against your business for injury or damage to property a result of your negligence e.g. you may be in a business meeting when a prospective client trips on your laptop cable and injures their back and is unable to work. Cover is Australia –wide for where you conduct the business.



Property Insurance is to protect your business from financial risk of loss caused by fire, storm or other perils.

Business Interruption Insurance this protects your income stream and allows your business to continue to operate following a property loss such as fire.

While you are eager to get your product out into the market, do not put yourself and your business at risk.

For personal assistance and to discuss your own individual circumstances, please contact the friendly team at Insurance Made Easy 1800 641 260



Lydia Jordane - LYCON Founder & CEO

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Since time immemorial, hair removal was a wide spread practice in many parts of the world, including the ancient world. There has been a myriad of concoctions made from sugar, water and lemon juice, usually a home brew. Others made depilatory products from pine resin mixed with other ingredients to make a blend that could be applied to the skin, but not always successfully. Then there was the question in more modern times for women whether to shave or not to shave? And such was the question for Lydia Jordane, Founder and CEO of LYCON Cosmetics, who was brought up in Eastern Europe where women in the 60's did not remove body hair. In fact it was a cultural taboo to do so, in other words 'unlady like'.

After migrating with her family from Europe to Australia in 1964, Lydia began to attend and all girls school. As fate would have it, she soon realised that hairy legs were not the norm in her new country, so determined to have hair-free legs like all the other girls, Lydia locked herself in her room and experimented removing hair with an old fashioned razor and depilatory cream. Lydia disliked the speed of the hair regrowth,

not to mention the prickly, coarse feel. By 1968, she was fed up with shaving, when she stumbled across an article about hair removal, which also mentioned waxing. She found that waxing had all the positives she was looking for in being hairless. With waxing, hair regrowth is soft as the regrowth is a new hair which grows with a point. With regular waxing hairless patches develop, so there is a reduction of hair growth. Wax wasn't readily available on the market, so she set out to develop her own blend, knowing that once hair gets pulled out by the roots, it grows back slower, softer, finer and there is less of. A definite answer to smoother skin that lasts longer.

One day, Lydia's father arrived home unexpectedly to find Lydia with a saucepan of wax bubbling on the family kitchen stove, "What's cooking?" her father asked, "It's Caramel!" Lydia replied, despite knowing it would be hard to convince a cosmetic chemist that the smell of pine resin could possibly be caramel. However to Lydia's delight, her father had also noticed the different hair removal practices in Australia and little did she know that this was the beginning of her future waxing business!



by Lydia Jordane

Lydia became a beauty therapist in 1978, armed with her wax and well developed waxing techniques which she perfected while waxing her huge waxing clientele. Her criteria was that the wax had to be easy to use, pliable, have the ability to remove short, stubborn hair and be comfortable for use on all skin types. Further experiments succeeded in perfecting her wax formula to meet her exacting professional standards.

These experiments delivered just what the industry needed and LYCON still remains the standard for the best quality professional waxing, the world over.

Given Lydia's creativity and understanding of Beauty Therapists and client's needs, she developed the iconic Rosette Wax, SoYummy Chocolate Wax, SoBerry, LYCOflex, LYCOtec, in both strip and hot waxes. In addition there is the outstanding and unique Lycojet hot wax duo in Lavender or Desert Rose, which can be used very thinly. More recently Lydia developed the LYCOdream Hybrid hot wax, which is an amazing blend of LYCON LYCOtec hot wax and Lycojet. What makes LYCON special is the precise blend of ingredients, sourced from around the world, which include the finest resins, bees wax and the soothing and calming properties of various aromatherapy oils, Argan Oil, Titanium Dioxide, in various colours and scents.

The defining points of difference with LYCON waxes are that they have a superior grip and they possess unparalleled gentle waxing. LYCON hot waxes remove hair as short as 1mm, they are a low working temperature, super pliable and gentle waxes, which provide a nurturing and skin conditioning treatment for extra client comfort, on even the most sensitive skins. LYCON hot waxes can be reapplied 5-6 times on just waxed skin, without the clients feeling the heat from the wax or experiencing discomfort.

The beauty of LYCON strip waxes is that they have no skin drag, will not remove skin and are able to remove quite short hair. They can be used super thinly; you only need 25 grams of LYCON strip wax for a half leg wax, which is for both legs!

It is no wonder LYCON enjoy a well deserved reputation as the Crème de la Crème of hair removal waxes, and is the wax of choice in the top spas and salons in over 65 countries. This reputation and recognition is built on LYCON's philosophy of unsurpassed product quality, performance and professional integrity. Beauty professionals use

LYCON with confidence and achieve completely hair-free results for all types of hair growth, every time. LYCON's array of quality waxes in exciting colours and scents allows professionals to tailor the best waxing combination with the LYCON WAXING SYSTEM to suit their salon for total customer satisfaction.

The LYCON Waxing System is complimented with harmonising PrePost waxing lotions which are important and a must during all waxing treatments, for practically painless waxing from head to toe.

LYCON recognises that the correct waxing techniques and products need to be at the beauty therapists fingertips and as such Lydia has made a huge contribution and commitment to the beauty industry worldwide by offering and delivering waxing training around the globe. LYCON's staff and of course LYCON's distributors also offer training globally as well, to keep the salons up to

date in LYCON's waxing techniques if needed and also in the many LYCON products available for home use. In addition, LYCON Spa Essentials range of products provides corrective and indulgent treatments for home use and in between salon visits.

Some of these products are the unique Ingrown-X-It products that work to minimise the appearance of ingrown hairs and razor bumps, the LYCON Oil-Free Sugar Scrubs and Hand & Body Lotions, which effectively exfoliate dead cells, boost hydration, improve circulation and refine the skins surface, while the Hand and Body Lotions boost hydration with their vitamin rich, non-greasy formulas complete with anti-ageing and soothing benefits.

LYCON's superior product range continually redefines global waxing standards and it is no wonder LYCON is sought after by celebrities and those "in the know" across six continents.

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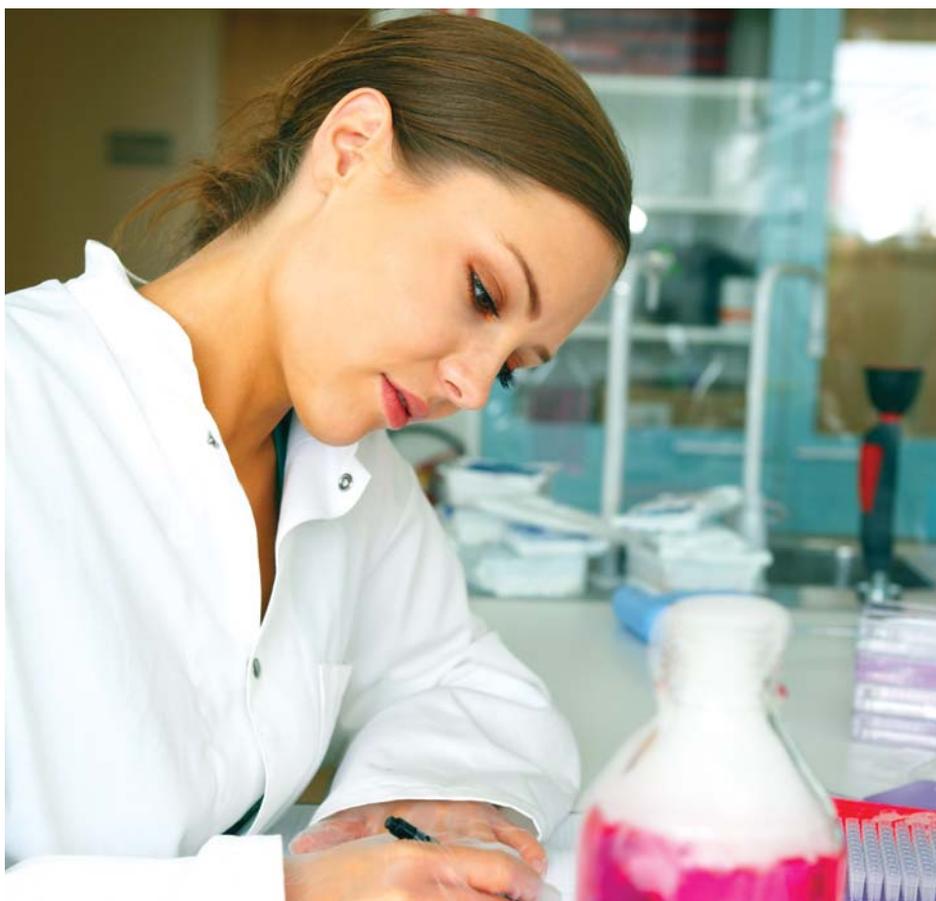
The benefits of membership are:

- Connection to the international cosmetic science network through the ASCC's affiliation with the International Federation of Societies of Cosmetic Chemists (IFSCC) and the Asian Society of Cosmetic Chemists (ASCS).
- Members' rates for regular lectures, seminars, workshops, networking functions and internationally attended annual conference.
- Complimentary subscription to The Science of Beauty magazine and the SCC E-Newsletters.
- Direct access to the latest news on relevant products, services and technologies.
- Tapping into a veritable expertise database from formulating to packaging, to product

testing to marketing to fragrances.

- Eligibility for various education and travel awards where the prize includes travel to present at the IFSCC conferences or congresses (held on alternate years around the world).
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Membership is open to individuals working in/or interested in the cosmetics, toiletries and perfumery industries. Our members branch beyond Formulation Chemists to include Brand Owners, CEOs, Marketers, Sales Professionals, Students, Claim Substantiation Experts, Academics, Production Personnel through to Business Advisors. All new members are invited to attend their first lecture diner free-of-charge, so visit www.ascc.com.au to join now.





Nanotechnology – benefits vs risks

Nanotechnology is a rapidly evolving area across many sectors including science, electronics and medicine. In the cosmetic and personal care industry, we are starting to see a gradual shift in interest from cosmeceuticals to nanocosmeceuticals – which is rapidly emerging as the new frontier. Despite being viewed as a new technology, the cosmetic industry has been using the concept for decades, with the use of liposomes in moisturisers. Whilst nanotechnology and nanomaterials are providing opportunities for improvement in the application of the technology in the design, development, manufacture and improvement in physical properties of a product, there is an increasing concern and debate amongst industry, scientists, consumers, the public, regulatory authorities and environmental groups about the risks that may be associated with the implementation of such technologies and how they are managed and monitored to ensure safety for all involved in all stages from development, manufacture and

consumer use of a product. Whilst some nanoparticles raise little concern, there is an increased concern about potential risks to health and safety posed to those that may come into contact with such materials. Such concerns have caused some in the industry to limit their use in cosmetics. Currently there are inadequate regulations and laws in place to protect from harm or assess risk.

What is nanotechnology?

Nanotechnology can be defined in various ways, depending on its application, but one thing is clear, when we talk about nanotechnology, we are referring to the manipulation of material to an extremely small size, with at least one critical dimension between 1 and 100nm. One nanometer is one billionth of a metre. A nanoparticle cannot be seen by the naked eye or a typical light microscope. Just to put it into perspective, a human hair is 80,000 nanometers in width. When referring to nanotechnology, terminology that is often used to make



by Tina Aspres

reference to this includes nanoparticle, nanoemulsion, nanotube, nanocapsule and nanopigment, fullerene/buckyball, solid lipid nanoparticle, nanocrystal, dendrimer, cubosome and quantum dot.

Nanotechnology in cosmetics

Nanoparticles and nanotechnology is

increasingly being used in the cosmetic industry, taking advantage of the new characteristics imparted, resulting in improved product performance. Some of the beneficial applications include improved solubility, increased product stability, better UV protection, increased shelf-life, colour enhancement, longer-lasting effects, transparency, improved skin penetration, and better quality end product. All of these are desirable attributes for a cosmetic product.

Nanoparticles have been used in sun protection products for many years. Physical sunscreens regularly contain titanium dioxide and zinc oxide nanoparticles. This provides a much more aesthetically pleasing, transparent product for use compared to the thick, white or opaque product when non nanoparticles are used. Products are also easier to apply as well as affording a more efficient UV filter, reflecting/dispersing ultraviolet light more effectively.

Novel delivery systems in the form of microemulsions, nanoemulsions and liposomes have provided an opportunity to develop more efficient delivery systems (e.g.: for proteins and peptides) providing enhanced absorption of active ingredients. Liposomes can effectively deliver moisturising ingredients to the skin. Sensitive and unstable ingredients can be encapsulated into liposomes. Nanoemulsions and nanosomes have been used to preserve active ingredients such as vitamins and anti-oxidants as well as to enhance product performance. Fullerenes are used as nanomaterials in high-end anti-aging cosmetic products. They are quite controversial with concerns about potential toxicity. Silver nano particles display antibacterial activity and have been included in deodorants. Nano-aluminium oxide is used in concealers and mineral foundations because it diffuses light to improve the 'appearance' of wrinkles.

Most major cosmetic companies are using some form of nanotechnology, however, whilst some companies promote the use of the technology as part of their marketing, others decline to reveal whether they use it. The one

thing that is clear, with the increased use of such technology, whilst creating great products, there are potential risks associated with any benefits.

Nanoparticles – what are the concerns?

There is an increasing concern regarding the effects of nanoparticles and their impact on human health, toxicity and their effect on the environment. Nanoparticles exhibit physical and chemical properties which are different to their larger counterparts. This is due to the smaller size, chemical composition, surface structure, shape, solubility and aggregation properties. The main concern is that some substances may get into the bloodstream by either skin penetration, ingestion or inhalation.

The list of concerns is endless with cytotoxicity, genotoxicity, biodegradation, bioaccumulation, ecotoxicity, reactive oxygen species, free radical release, oxidative stress, inflammation, damage to DNA, proteins and membranes frequently being cited in literature. Most studies, however, have been carried out in animal models only, under exaggerated conditions that may not be relevant to humans. Despite this, the investigation of any possible risk to human exposure must not be disregarded.

Penetration of nanoparticles in the skin

Dermal absorption is influenced by various factors – namely the site of application, the presence of an impaired skin barrier, the physicochemical properties of the active and the physicochemical properties of the vehicle transporting the active.

There are various scientific studies regarding penetration of nano particles and the skin. Some studies have shown that some nanoparticles certainly have the potential to penetrate skin. Skin that is compromised or broken is at greater risk by acting as a direct route of penetration leading to possible enhanced absorption into the bloodstream. The

concern is that should nanoparticles get into the bloodstream, they pose a risk of possible accumulation in tissues or organs and induce toxicity. Of particular interest are people suffering with eczema, psoriasis, sunburn or anyone who has an open wound – as they appear more susceptible.

Inhalation of nanoparticles

This is the most common route of exposure of airborne nanoparticles. Consumers may be at risk from inhalation of nanoparticles contained in spray preparations or powder cosmetics whilst an occupational risk arises for those involved in the manufacturing process if appropriate protective equipment is not worn.

Environmental concerns

There is concern that nanomaterials may be released into waterways, the air and soil during the manufacturing process or when disposing such materials. Considerations need to be given to the potential risk of these materials and their effect on the ecosystem. Studies have shown that nano titanium dioxide has been found in rainbow trout and contributes to decreasing the activity of beneficial bacteria in sewerage plants. Fullerenes have been reported to cause brain damage in bass, a species of fish which is used by regulatory authorities as a model to define ecotoxicity.

Safety assessment

With an increasing number of nanomaterials being used, an appropriate risk assessment process needs to be put in place to determine the potential for harm. Currently, there are no specific regulations regarding the safety assessment of cosmetic products. Whilst NICNAS (Australia) regulates the safety of ingredients used in cosmetics and personal care products and the TGA regulates sunscreens, there is no means to distinguish between the nanoparticle and larger particle size of an ingredient.

Both the TGA and the FDA current position is that the current scientific evidence does not support a finding

that classes of products with nanoscale materials pose any greater safety concern than their counterpart larger materials.

In the EU, however, Parliament has approved an amendment that has been incorporated in the EU Cosmetics Directive which requires a safety assessment for any product that contains any nanomaterial as an ingredient. This will allow only safer nano products to enter the marketplace, safeguarding the health of the consumer. Should such an ingredient be deemed to pose a risk to human health, such a substance may be banned from use.

A major global concern is that there is little evidence regarding how extensive and what type of safety assessments are done by individual cosmetic manufacturers on their products prior to them going to market. With an increasing number of cosmetic and personal care products containing nanomaterials on the market, there are

no specific regulations regarding safety assessment.

Conclusion

It is evident that there is currently a knowledge gap in assessing the safety of exposure to nanomaterials used in cosmetics. There are different interpretations of nanotechnology as well as various methods of assessment that are adopted to assess safety within an individual company across the industry. As there is no uniformity for assessment on nanomaterials, each nanomaterial should be evaluated on an individual basis and undergo a safety assessment before being permitted for use. Consumers are under the misconception that any cosmetic product that is on the market, has been assessed for safety. Whilst this is true for pharmaceuticals and sunscreen products, it is not the case for cosmetics. At present, it is whomever markets cosmetics who has a legal

responsibility and obligation to ensure the products and ingredients they are producing, including nanomaterials, are safe for human use. Nanoparticles exhibit unique physical and chemical properties that make them unique and desirable – but absolute safety has to be established. Consideration needs to be given to new harmonised cosmetic regulations that can be applied internationally to afford some accountability for assessing the safety of nanomaterials before such products are sold. Products containing nanomaterial should be appropriately labelled to allow the consumer to make an informed choice. Any product with possible safety issues should be withdrawn from sale until safety has been established. More extensive research and safety testing is required to assess the risks versus the rewarding opportunities and benefits of incorporating nanotechnology into cosmetics, to allay consumer fears and confusion.



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before and after photos in cosmetic trials

by Emanuela Elia

One of the characteristics of dermatology is that skin conditions, as well as the effects of skin treatments, are typically apparent to other people. As a result, photography has for decades been a useful tool in dermatology practices. Digital photography is also extremely useful in clinical trials. Digital photographs allow for documentation of assessments conducted at different time points. As such, photos can assist the research site's independent evaluator and help reduce variability of the results. There are several high quality digital systems available on the market, which provide high functionality and standardisation in the clinical research environment. Whichever the photographic equipment to be used, the fundamental rule in clinical trial photography is achieving a high level of consistency between photos taken at different time points. Here is a list of the key elements that must be kept consistent throughout a clinical trial:

Lighting

The role of lighting is crucial in clinical trial photography as it has the most impact on the way skin features

will be captured. Skin characteristics can be enhanced or overshadowed by simply changing light direction and intensity. For example, illumination coming on an angle will show skin texture and contour much better than straight light. Even a small change in lighting can result in a great change in the appearance of skin.

Subject positioning

As important as consistent positioning is, it is one of the most difficult tasks to achieve. When taking photos at different time points, changes in subjects positioning is a natural consequence. To minimise this there are a number of special fixtures and devices that allow standardisation of subject's positioning and/or distance to the camera. Some medical imaging software also allows view of the previous images with an overlay of the picture about to be taken in order to achieve the closest possible match.

Camera Settings

Once suitable lenses and camera settings for a specific project have been identified, they have to be maintained consistently throughout the study.



Resolution, exposure, white balance, focus will need to be considered. Therefore, auto mode settings are generally not recommended for digital photography in clinical trials.

Subjects

Any artefacts in the picture should be avoided (e.g. jewellery, make up) or standardised (e.g. clothes or gowns, hair). The area to be photographed needs to be checked and prepared as appropriate to ensure consistency (e.g. washing skin and removing make up).

Retouching

Refraining from editing of photographic images taken during the

continued on page 37

ASCS2015 CONFERENCE PREVIEW

CHAIRPERSON'S INVITATION

On behalf of the Conference Organising Committee (COC), it is with great pleasure and excitement that we extend this invitation to the readers of Science of Beauty to participate in ASCS2015.

2015 will be a different year for Australia as the traditional national ASCC conference will take the form of an Asian Societies of Cosmetic Scientists (ASCS) conference.

That's right! For the first time in its 22-year history that started in Kobe, Japan in 1993, the biannual ASCS conference will be coming to Australia. From April 28 – 30, 2015, beautiful Cairns will play host to the 12th Biannual Conference of the Asian Societies of Cosmetic Scientists. Nestled between two World Heritage Listed sites, the *Great Barrier Reef* and the *Wet Tropics Rainforest*, what better place than Cairns for international cosmetic enthusiasts to converge and, to ponder and debate on our conference theme: *"Natural Wonders, Reinspiring Beauty"*?

Over 3 days, delegates may expect: a world-class trade exhibition, a presentation program with a stellar international line-up, all balanced with unique daily networking opportunities. Confirmed VIP Speakers for ASCS2015 starts with **Salvatore Battaglia** (Founder & Managing Director) of internationally recognised Australian aromatherapy skin care brand Perfect Potion. Our line up of plenary speakers includes **Dr Satoshi Amano** (Shiseido, Japan), **Dr Paul Matts** (Procter & Gamble, UK) and two Life Achievement Award winners: **Dr Alain Khaiat** (Seers Consulting, Singapore) and **Dr Karl Lintner** (KAL'idées, France).

The Team behind ASCS2015

In some ways it can be difficult to believe that some of us have been involved in ASCS2015 since mid-2012. What is definite though, is that an event such as ASCS2015 could not be staged without an intensely talented and committed team. A massive "Thank You" to: Albert Calvillo, Barrie Dean, Bianca McCarthy, Jenny Brown, John Staton, Julia Hudson, Kate Paulett, Marianne Cochenec, Robert McPherson, Trevor Lorman and Trish Maharaj. I would also like to take the opportunity to acknowledge both Paola Reyes & Jorge Larranaga, two original members of the team who due to other commitments has had to leave the COC. It has been an amazing experience to work with Team COC2015 and I sincerely look forward to our continuing efforts to bring this exciting event to fruition.

For more information, please visit: www.ascs2015.com or email: admin@ascs2015.com.

See you in Cairns in 2015!

Huy Nguon, Team COC2015 Chairperson

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PRELIMINARY SCIENTIFIC PROGRAMME

TUESDAY, APRIL 28th

KEYNOTE ADDRESS

Creating the Perfect Potion – *Mr. Salvatore Battaglia (Perfect Potion, Australia)*

SESSION 1

PLENARY: Imaging and Modelling the Human Face – *Dr. Paul Matts (Procter & Gamble, United Kingdom)* - Followed by 2 concurrent sessions:

SESSION 1A: Platform Presentations

Topical Application of Vitamin D Metabolites Protects Against Photoageing – *Ms. Bianca McCarthy (University of Sydney, Australia)*

Exploring Mechanisms for Antiaging - Does One Size Fit All? – *Dr. Helen Knaggs (NuSkin Enterprises, USA)*

SESSION 1B: Workshop

Ayurveda for Hair – *Dr. Mukundan Satyanarayanan (Vcare Trichological Research Centre, India)*

SESSION 2 (3 Concurrent Sessions)

SESSION 2A: Platform Presentations

Reduced Autophagy in Skin Aging and Positive Regulation by a Saponin-Rich Asparagus Extract – *Ms. Elodie Grand (DSM Nutritional Products, Singapore)*

Influence of Anti-Aging and Skin Barrier Effects by Anthraquinone in the Root of Morinda officinalis During Thermal Processing – *Mr. Jung Wook Kang (Hanbul Cosmetics Corporation, Korea)*

SESSION 2B: Platform Presentations

Preventing Hair Loss by Balancing the Hair Cycle, Strengthening the Hair Follicle, and Improving Scalp Health – *Ms. Yvonne Tan (Evonik Industries, Singapore)*

Development of Platy Colorant Complex Powder Having High Color Make-Up Pigmenting Effect – *Mr. Jong-Gun Kim (Cosmecca, Korea)*

SESSION 2C: Workshop

The Modern Alchemy of Carbon Dioxide Extraction – *Mr. Ron Guba (Auromatics, Australia)*

WEDNESDAY, APRIL 29th

SESSION 3

PLENARY: Cosmetic Claim Substantiation for Natural Beauty: Quo Vadis? – *Prof. Dr. Karl Linthner (KAL'ideas, France)* - Followed by 2 concurrent sessions:

SESSION 3A: Platform Presentations

Stem Cells & Peptides: Bridging Cosmetic Science & Therapeutic Medicine – *Dr. Russell Vickers (Sydney Oral & Maxillofacial Surgery, Australia)*

Targeting Skin Microbiome: a New Skin Care Strategy – *Dr. Edwige Ranouille (Greentech, France)*

SESSION 3B: Workshop

Skin Tone: Enhance, Modify, Customise – *Ms. Sitanun Rattanavattanathorn (Merck, Thailand)*

SESSION 4 (3 Concurrent Sessions)

SESSION 4A: Platform Presentations

The Effect of Dipotassium Glycyrrhizate on Sensitive Skin Care - *Mr. Tatsuo Nakahara (Maruzen Pharmaceuticals, Japan)*

SESSION 4B: Platform Presentations

Madecassoside Inhibits Melanin Synthesis by Blocking Ultraviolet-Induced Inflammation – *Ms. Eunsun Jung (Biospectrum Life Science Institute, Korea)*

SESSION 4C: Workshop

Overcoming Sensory, Stability & Performance Issues when Formulating Natural & Organic – *Ms.*

Indonesian Herbal Extract for Skin Lightening and Anti-oxidants – Dr. Joshita Djajadisastra (Faculty of Pharmacy, University of Indonesia)

Care of the Epidermis - Top level Anti-aging. Utilising Natural Cosmetic Actives to Support the Epidermis and Improve the Skin's Appearance – Mr. John Lofthouse (CLR Berlin, Germany)

Development of a New Quantitative Evaluation Method for Individual Pigmented Spots and its Application to Facial Skin – Ms. Kumiko Kikuchi (Shiseido Research Center, Japan)

Dermal Fibroblasts are Capable of Activating MMPs by Themselves – Ms. Aska Sonoki (Oppen Cosmetic, Japan)

Belinda Pilmore (Institute of Personal Care Science, Australia)

SESSION 5

PLENARY: Anti-aging Skincare for Cutaneous Photo-aging – Dr. Satoshi Amano (Shiseido Research Center, Japan) - Followed by 2 concurrent sessions:

SESSION 5A: Platform Presentations

A Systematic, Tiered Approach to Phototoxicity Testing – Ms. Sakiko Aizawa (KOSÉ Corporation, Japan)

Assessing Ingredients for Sensitive and Immature Skin Using the Thor in-vitro Immature RHE Skin Model – Mr. Kevin Roden (Thor Specialties, Australia)

SESSION 5B: Workshop

Australia's Natural Wonders Inspire the Evolution of Botanical Extracts – Mr. Ross Macdougald (Native Extracts, Australia)

SESSION 6 (3 Concurrent Sessions)

SESSION 6A: Platform Presentations

Isolation and Characterisation of Active Whitening Compound from the Stem Bark of Maackia amurensis – Ms. Gwee Kyo Park (Kolmar Corporation, Korea)

Whitening Effect of Biochanin A – Mr. Sung Ha Park (Kolmar Corporation, Korea)

A Cosmetic Formulation Containing Conotoxin-Mimic Peptide for Relaxing Expression – Ms. Sun-Young Kim (Amorepacific, Korea)

SESSION 6B: Platform Presentations

Topically applied Keratins for Hair and Skin Care – Dr. Gillian Worth (Keraplast Research, New Zealand)

Biotechnology, a Pivotal Technology to Produce Sustainable Cosmetic Active Ingredients – Mr. Matthew Martens (Croda, Australia)

100% Natural Nonionic Emulsifiers and Solubilizers – Mr. Robert J. Coots (Colonial Chemical, USA)

SESSION 6C:

**Workshop
Natural and Organic Innovations in Australia** – Mr. Jorge Larrañaga (Australian Certified Organic, Australia)

**Platform Presentation
Carnivorous Plants a Natural Wonder to Reshape the Body** – Mr. Andrew Sepansky (Connell Bros Company Australasia, Australia)

THURSDAY, APRIL 30th

SESSION 7

PLENARY: Regulations Across Asia: From China to the New ASEAN Economic Community – Dr. Alain Khaïat (Seers Consulting, Singapore) - Followed by 2 concurrent sessions:

SESSION 7A: Platform Presentations

Sun Protection Test Methods: The Worldwide Situation – Dr. Claudie Willemin (L'Oreal, France)

The Commercialisation of a New in vitro Test Method to Determine the Potential Immune Response of Topical Products on Human Skin – Dr. Bryce Feltis (Baxter Laboratories, Australia)

SESSION 7B: Workshop

Tris Biphenyl Triazine, A New Particulate Organic UV Absorber for Efficient Sunscreens – Mr. Marcel Schnyder (BASF, Germany)

SESSION 8 (3 Concurrent Sessions)

SESSION 8A: Platform Presentations

Improving Cellular Cross-talk to fight Skin Aging – Dr. Silvia Pastor (Lipotec – The Lubrizol Corporation, Spain)

Understanding how a Unique Extremophile Plankton Adopted to Severe Environmental Conditions Can Help to Address Multiple Skin Ageing Factors – Mr. N. Astles (Ashland, France)

An I M C D Journey Through Nature-Inspired Market Trends – Mr. Valerio Vergani (IMCD Italia, Italy)

SESSION 9 (3 Concurrent Sessions)

SESSION 9A: Platform Presentations

Safe-guarding Inorganic Oxides in Personal Care Products Photoprotection Using Methoxyl Substituted Aryl Propenoic Acid Derivatives – Mr. Philip Jacobs (The HallStar Company, Singapore)

Hybrid Polymers: A new Class of Sustainable, Bio-based Polymers for Personal Care Applications - Ms. Jane Wang (AkzoNobel Surface Chemistry, China)

Sustainable Emulsion Concept: Achieve Good Emollience with Less Oil Content – Ms. Carla Perez (Seppic, China)

SESSION 8B: Platform Presentations

Anti-inflammatory Effects of Sunscreens - Wonder or Science? – Mr. John Staton (Dermatest, Australia)

Beetle Leaf Oil - New Sunscreening active for Cosmetic Industry – Ms. Renuka Thergaonkar (Alcos International, India)

Maintenance of Skin's Own Beta Carotene Based Protection System Against ROS - Introduction of a New in vitro Assay and an Appropriate Protector – Ms. Lilia Heider (Merck, Germany)

SESSION 9B: Platform Presentations

Cosmetics and Sunscreens - Analytical Testing Requirements – Mr. Scott Colbourne (ALS Pharmaceutical, Australia)

Efficacy of Sun Protection: Do We Need Sunscreens with UV or Light Protection? – Prof. Juergen Lademann (Charité – Universitätsmedizin Berlin, Germany)

Developing High Performance Sunscreen Products without PEG-based Surfactant – Ms. Sachiko Dairaku (Pola Chemical Industries, Japan)

SESSION 8C: Workshop

Creative Ways of Protecting Cosmetic Industry Innovations, Including Cosmetics Inspired By Nature and Made From Nature – Mr. Gint Silins (Cullens Patent & Trade Mark Attorneys, Australia)

SESSION 9C: Platform Presentations

Formulation & Antioxidant Activity Assay of Black Glutinous Rice Brand Extract (*Oryza sativa* L. var *glutinosa*) Cream – Mr. Richie Chandra (Faculty of Pharmacy, Universitas Padjadjaran, Indonesia)

Bioactive Fucoidan Fractions as Cosmetic Ingredients – Dr. Helen Fitton (Marinova, Australia)

Anti-Melanogenic Effects of Ascorbyl Coumarates – Mr. Chool Boo Young (Kyungpook National University, Korea)

SESSION 10 (3 Concurrent Sessions)

SESSION 10A: Platform Presentations

Friction and Adhesion of Products and Materials on Human Skin: Product Development Research in Kimberly-Clark – Dr. Martha Tate (Kimberly Clark, USA)

A Possible Role of Apoptosis Associated Serine Proteinase, HtrA1, in the Maintenance of a Homeostasis of Skin Epidermis – Ms. Miyuki Fujishiro (Nikkol Group Cosmos Technical Center, Japan)

SESSION 10B: Platform Presentations

Multifunctional Polyurethane For Improved Performance of Zinc Oxide Containing Suncare Formulations – Mr. Gary Yao (Lubrizol Southeast Asia, Singapore)

A Two-pronged Approach Using Whole Plants and Plant Tissue Culture to Enhance Skin Tone and Luminosity – Ms. Suellen Bennett (Lonza Consumer Care, USA)

SESSION 10C: Platform Presentations

Development of Fourth Generation Retinoid, Seletinoid G, for Enhancing Skin Elasticity – Mr. Ho Sik Rho (Amorepacific Corporation, Korea)

SESSION 11

CLOSING SESSION: Ultraviolet Filters Inspired by the Corals of the Great Barrier Reef – Dr. Mark York (CSIRO, Australia)

Please be advised that this is a Preliminary Program only. Presentations and Speakers are correct at time of publication and is subject to change. A Final Program will be available closer to the conference date.

There will also be a Poster Presentation Program available at the conference.

Consistent = Good

Good quality photographs taken consistently are a valuable resource during clinical trials and beyond. For example they can be used also for marketing purposes. Photos are usually taken before the treatment (baseline), during the treatment to monitor changes and at end of the treatment to document the results. Standardisation of the digital images in clinical trials can be achieved by taking into account all factors that affect the quality and the characteristics of the resulting photographs.



LEFT EYE AT BASELINE

LEFT EYE AFTER 1 MINUTE

Example of consistent photography in a cosmetic trial for a fast acting under eye wrinkle and puffiness remover

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.

continued from page 32

trial is generally the best approach. Once appropriate camera settings have been identified there should not be a need for retouching of the images. Unless, this

is a specific requirement for presenting the results of the images taken during the study, and provided the retouching is conducted consistently on all photos taken throughout the study.

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TRI-K
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by Margaret Smith



pearls, milk, snow, white and lightness

Welcome to a new column that we trust becomes a staple in the magazine. It is a formulary (recipe book) of current and sometimes very old ways of getting a result. This episode has a bit of difference in that I am combining formulas with a bit of history and a lot of my “musing” flavour.

Starting Formulas for cosmetics and personal care can be found through all the suppliers of raw materials. Many have web pages that are free of registration but most are not. There are also quite a few blogs of Cosmetic Chemists (mainly in the US that I know of) that share formulas. So in this column we are pulling together a bit of history and experience and maybe social comment (as if I could help myself). This column will be shared between suppliers about the place so there will be a fair spread of ideas. And I will wander back to just plain musings. So to kick things off, I decided to start the column about one of our most requested products to develop and produce:

The new (old) science of Skin Tone Lightening creams and serums and potions

Throughout history, skin tone has consistently been seen as a physical marker of difference, of distinction. The female beauty ideal of pale skin is canonical throughout many different world cultures. Greek female skin was expected to have “surpassing pallor” and uniform complexion. Romans utilised ceruse¹

on their faces to achieve this beauty ideal, even though they understood the pigment (white lead) to be toxic: it literally gave them a deathly pallor.

Portraits of women during the Middle Ages depict the “realistic ravages of lead poisoning” to which women subjected themselves in order to maintain the white ideal. The ideal of pale skin continues today, even among women with dark complexions.

Some African-American women have their own special “skin lightening” practices, betraying ideals that the “Black is Beautiful” cultural movement tried to reframe in the minds of young African-American women. These efforts seem ironic in the face of the contemporary culture where Caucasian women, who are considered to be the dominant, hegemonic females of the world, covet darker skin and use spray tans and tanning booths to become tanner.

We are all too familiar in the



Elysia Pan, Beautiful White: An Illumination of Asian Skin-Whitening Culture, April 2013

1 ceruse is a mix of white lead and vinegar.

formulating and manufacturing game how sunscreens, tanning products, fake tans and now whitening products can dominate production over the year. It seems that if we are pale we want to be tanned and olive or if we are so then to be paler is the aim. With the market in China exploding past the tens of billions US\$, many new Brand-Owners believe that the success of P&G's Fair and Lovely series of lotions and potions



is their ticket to success in Asia and the Subcontinent, as well as Africa and South America.

The term "spot lightening" is used for fairer skinned individuals in European populations. The message is the same I guess P&G got it right to be Fair is Lovely and is has caught on.



And I think here it is fair (no pun intended) to say that they are basically the same leopard with different

spots (oh they just keep coming :)! Back to pearls, milk, snow, lightening, whitening or brightening – whatever we want to call the method, whitening of the skin and looking pale is not an asian or subcontinental new phenomenon. The wanting to be pale and wan or even magical or ethereal has been with mankind since nearly the beginning of time if ancient wall paintings are anything to go by. Whilst we as humans are a herd type animal and like to be accepted and part of the group, there still is a tendency to be a bit different as well.

The first and still the simplest method to reduce colour and show a flawless skin is to paint it.



Ancient Egyptians began making "ceruse", with a mix of either chalk (lime) or lead or both in a fatty

base. This whitened face canvas allowed the eyes to be enhanced with black kohl

and the lips and fingernails brightened with red ochre. The ancient Egyptians also regarded themselves quite separate from the dark skinned Nubians just down the road, so I guess the application of 'ceruse' highlighted that distinction.

Lead as a foundation was used until quite recently to pale oneself up. The upper classes of the past liked lead for its white as whiteness (actually in today's world it was a bit yellow as this was before titanium which really is WHITE), but it is now known as "DEAD WHITE", for its obvious lethal toxic attributes. The lesser and fashionable classes were luckier by using either the lime or kaolin. No affluent and stylish woman in any country was safe from the "dead white" scourge until zinc white was discovered in 1834 (which gave a bluish tinge) and then Titanium (maybe a bit grey) in the early 20th Century. It did mean that these "upper classes" were doomed to a short and sick life though and really if you had "pox" (small pox scarred) skin then coating it in white would not really help. Elizabeth I was warned by many that: *"The Ceruse or white lead which women use to better their complexion, is made of lead and vinegar; which mixture is naturally a great drier; and is used by chirurgions to drie up moiste sores. So that those women who use it about their faces, doe quickly become withered and gray headed, because this dowth so mightely drie up the naturall moysture of their flesh."*

Giovanni Lomazzo, A Tracte Containing the Artes of Curious Paintinge, Carvinge and Buldinge

Painting faces now has become another art form with foundations, powders, cream colours, sticks, tinted moisturisers



Figure 3: Empress Wu, China



Figure 1: Actress made up as Elizabeth I, England



Figure 4: Cricket tragic and Cricketer zinc face or nose

and in recent history the BB, CC, DD, EE, FF on and on creams (as above) all lovely and tinted to the finest shade of skin, not now just white. They appear natural, and nothing like a lovely geisha or QE1! Now thank goodness just at the moment, not many want the pure white look ... or am I wrong?

And there are many other ways to create a lighter skin tone without painting the face.

Skin lightening has never been an exact science. One would put a vitamin or two (usually the b's and c) with a sunscreen with the latest whiz bang raw material. In developing the best of skin lighteners one must understand the mode of action to lighten, and by specifically targeting three different components of the skin's pigment producing system, one can achieve the key elements of successful skin lightening:

- (a) Tyrosinase inhibition (using a chemical that controls the enzyme that oxidises melanin so ones skin does not darken)
- (b) Mitf inhibition (Mitf is a protein in the genes that epress the melanin synthesis so inhibiting this function also inhibitness brownness)
- (c) Down regulation of MC1R activity (melanocyte-stimulating hormone receptor (MSHR), you get it more about melanin the stuff that makes one brown)



Figure 2: Modern geisha beauty, Japan



- (d) Interference with melanosome maturation and transfer (again stopping the brownness)
- (e) Melanocyte loss, exfoliation (rubbing off the brownness)

There are more but if we basically look at four pretty simple steps

- 1 Protect the skin by stopping the sun activating melanin by using a strong sunscreen (or staying out of the sun).
- 2 Use a few ingredients that assist in the melanin ever being formed
- 3 Exfoliate off the dead skin by either mechanical (scrub) or chemical means, and
- 4 Encouraging new cell turnover to reveal new pale skin.

Early chemical methods worked by aggressively bleaching the skin and while effective in solving one 'perceived' problem created many more 'real' problems. One of the early 'great leaps forward' involved replacing lead with mercury as mercury enabled the skin to be bleached! It should come as no surprise that since those early days the regulations on many cosmetics have toughened up considerably. Mercury



Figure 5: the perfect egg colour and texture

was one of the first, and it is still around, (behind the counter as opposed to over the counter) Hydroquinone and Arbutin have been now listed and controlled. Whilst in Australia skin whiteners are cosmetic unless they contain Hydroquinone, in most other countries they are regarded as "specials" and have a whole raft of other regulations, fiery hoops to jump through before they can be sold.

These days, safety is paramount, and while the science behind skin lightening has improved immeasurably, challenges remain. We as formulators are now asked to create products that remove all spots and flaws and literally creates a skin texture and colour like a boiled egg white. WOW!!! Oh yes and almost instantly.

Just to keep the challenge up, we are also asked to do a few other hoop jumps like:

- 1 Make it natural (possible)
- 2 The cream must be white (hard with all natural)
- 3 And inexpensive. (ha)
- 4 And instant (hence the use of tints to offer a flash effect)

OK, to be reasonable, many of these objectives are possible given the HUGE range of skin whitening raw materials, herbs, peptides and vitamins that react with the skins chemistry/physiology to prevent tanning or the creation of dark pigments. What it often means however is that the path to achieving a whitening product can be quite varied, depending

on the product brief.

In the relatively recent times of the Renaissance age there were many simple formulas for various whitening solutions. In that respect little has changed with modern times where there are again many solutions on offer. Perhaps marketing isn't that new a profession after all! If you read below you'll see some of the Renaissance treatments on offer. A word of warning, while some may appear to be 'organic' testing any of these formulations is at your own peril. We express no opinion of their safety or efficacy even for the ones that don't include white lead as an ingredient!

To make the hands and face white:

Take leaves and roots of nettle and boil them in water and with this water wash your hands and face and they will become white and soft.

To remove marks from the face:

Take iris [Iris florentina] roots and boil them in water until it is reduced by half, then purify and with this water wash the face and you will be free of blemishes.

To make you beautiful: Take iris roots and grind and make juice and put in a vial and leave it to settle. Then take the water from the top of this mixture, put it in fresh water and with this mixture wash the face, and it will be beautiful and have a notable color.

To make you beautiful: Take bread crumbs and egg white and mix them together and put them in vinegar for two whole days, and then use it as you please.

To cure redness of the face: Take white lead [ceruse], rose water and violet oil and mix together and anoint the face.

Water to make you beautiful:

Take strong vinegar and lemons cut in pieces and put in a glass alembic and put in powdered cloves and whole cloves, a little of each, and put everything in the alembic and save the water which is perfect and use.

For more information please visit <https://sites.eca.ed.ac.uk/renaissancecosmetics/>

Now for the modern approach using a few formulas kindly supplied.

Formula for Lightening from Lucas Meyer please contact Avenir Sharon
sharon@aveniringredients.com.au

LIGHTENING NIGHT CREAM 7.060.01 C54

Claims: Rich texture Soft skin feel Restructuring effect

PHASE	INGREDIENT	INCI NAME	SUPPLIER	%
A	Deionized Water	Water	-	62.10
	Glycerin	Glycerin	Interchimie	4.00
	Dermosoft® GMCY	Glyceryl Caprylate	Dr Straetmans*	0.50
	Satiaxane™	Xanthan Gum	Cargill	0.50
	CX 911 Biophilic™ H	Hydrogenated Lecithin (and) C12-16 Alcohols (and) Palmitic Acid	Lucas Meyer Cosmetics	4.00
B	Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	Emile Noel	5.00
	Hazelnut Oil	Corylus Avellana (Hazel) Seed Oil Beeswax	Emile Noel	5.00
	Cerabeil Blanche Selection	Tocopherol (and) Helianthus Annuus (Sunflower) Seed Oil Butyrospermum	Baerlocher	4.00
	Vitapherole® E1000	Parkii (Shea) Butter	VitaeNaturals	0.20
	Lipex® 102		AAK	3.00
C	Deionized Water	Water	-	5.00
	Whitessence™	Artocarpus Heterophyllus Seed Extract (and) Maltodextrin (and) Disodium Phosphate (and) Sodium Phosphate	Lucas Meyer Cosmetics	2.00
	Mamaku Vital Essence	Water (and) Glycerin (and) Cyathea	Lucas Meyer Cosmetics	2.00
	Nature PF	Medullaris Leaf Extract		
	Exo-T™	Butylene Glycol (and) Vibrio Alginolyticus	Lucas Meyer Cosmetics	1.00
	Tyrostat™ 09	Ferment Filtrate Water (and) Glycerin (and) Rumex Occidentalis Extract	Lucas Meyer Cosmetics	1.00
D	Potassium Sorbate	Potassium Sorbate	-	0.30
E	Relax 2020/2	Fragrance	Vanessence	0.40

Manufacturing Procedure:

- 1 Heat A and B up to 70-75°C. Keep A under slow stirring during 20 minutes.
- 2 Add B into A.
- 3 Keep under medium stirring for 5 minutes then increase stirring speed up to maximum level for 2 minutes.
- 4 Cool down under medium stirring.
- 5 Add C, D and E below 40°C.
- 6 Adjust the pH if necessary.

Formula Specifications:

Aspect: Off-white, bright and fragranced cream.

Viscosity (RHEO ELV8, Spindle 4, 6 rpm, 3 min): > 100 000 mPa.s

pH: 6.1 - 6.4

Centrifugation (3000 rpm, 20 min): Stable



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Please contact joanna.george@merckgroup.com

INGREDIENT AND PHASE		INCI	[%]
A			
RonaFlair® Soft Sphere	(1)	SYNTHETIC FLUORPHLOGOPITE, SILICA	1.50
RonaFlair® LDP White	(1)	SODIUM POTASSIUM ALUMINIUM SILICATE, CI77891 (TITANIUM DIOXIDE), SILICA	1.50
Water, demineralized		AQUA (WATER)	47.32
Glycerol 85%	(1)	GLYCERIN, AQUA (WATER)	6.00
RonaCare® Ectoin	(1)	ECTOIN	1.00
Keltrol CG-SFT	(2)	XANTHAN GUM	0.15
Triethanolamine	(1)	TRIETHANOLAMINE	0.10
B			
Titanium -(IV)- oxid	(1)	TITANIUMDIOXIDE	9.00
Unipure Yellow LC 182	(3)	CI 77492 (IRON OXIDES)	0.74
Unipure Red LC 381	(3)	CI 77491 (IRON OXIDES)	0.15
Unipure Brown LC 889	(3)	CI 77491 (IRON OXIDES), CI 77499 (IRON OXIDES)	0.07
Unipure Blue LC 686	(3)	CI 77007 (ULTRAMARINE BLUE)	0.04
C			
Eusolex® OCR	(3)	OCTOCRYLENE	8.00
Hydrolite-5	(4)	PENTYLENEGLYCOL	5.00
Miglyol 812 N	(5)	CAPRYLIC/CAPRIC TRIGLYCERIDE	5.00
Montanov 202	(6)	ARACHIDYL ALCOHOL, BEHENYLALCOHOL ARACHIDYLGUCOSIDE	4.00
Eutanol G	(7)	OCTYLDODECANOL	5.00
Avocado Oil	(8)	PERSEA GRATISSIMA (AVOCADO OIL)	2.80
Eusolex® 9020	(1)	BUTYL METHOXYDIBENZOYLMETHANE	2.00
RonaCare® AP	(1)	BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYL MALONATE	1.50
Bentone Gel GTCC V	(9)	STEARALKONIUM HECTORITE, PROPYLENE CARBONATE, CAPRIC CAPRYLIC TRIGLYCERIDE	1.00
Oxyhex® K liquid	(1)	PEG-8, TOCOPHEROL, ASCORBYL PALMITATE ASCORBIC ACID, CITRIC ACID	0.03
D			
Simulgel EG	(6)	SODIUM ACRYLATE/SODIUM ACRYLOYLDIMETHYLTAURATE COPOLYMER ISOHEXADECANE, POLYSORBATE80	0.60
E			
Water, demineralized			
Germall 115	(10)	IMIDAZOLIDINYL UREA	0.30
Fragrance			0.20

Procedure:

Disperse Keltrol slowly in the remainder of phase A while stirring. Add phase B and homogenize with a Ultra-Turrax T25 at a speed of approx. 17000 rpm for 5 min. Check that phase A/B is free of agglomerates. Heat phase A/B and phase C separately to 85°C. Add phase C to A/B while stirring and homogenize with a Ultra-Turrax T25 (speed slow-middle; approx. 9500 rpm) for about 2 min.

At 55-60°C add phase D while stirring. At 40°C add phase E. Cool down to room temperature while stirring and add phase F. Adjust pH to 6.7-6.9.

Notes:

This light BB Cream "Sand" is very suitable for young and light skin types and has a slightly covering finish. A soft skin feeling with soft focus effect is bestowed by RonaFlair® LDP White. A well balanced choice of UV Filters Eusolex® OCR and Eusolex® 9020 is a must for a daily wear. RonaCare® AP generates antioxidant power by combining stable activity with active stability while it provides sebum control and efficient prevention of impure skin. In vitro SPF (PMMA, HD6 plates, 1.3 mg/cm²) = 36.1 +/- 26.3%.

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- | | | |
|-----------------------------------|------------------------|---------------------------|
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| (4) Symrise | (5) Sasol Germany GmbH | (6) Seppic |
| (7) Cognis GmbH | (8) Gustav Heess GmbH | (9) Elementis Specialties |
| (10) ISP Global Technologies | (11) Cosnaderm GmbH | |

Brightening Serum (130115M5)			
	INCI Name	Ingredient	%
A	Water	Water	To 100.00
A	Allantoin	Allantoin	0.10
A	Hydroxyethylcellulose	2% Natrosol 250HHR	20.00
B	Sodium Citrate, Dihydrate	Sodium Citrate	0.87
B	N,N,N',N'-Ethylenediaminetetrakis (methylenephosphonic Acid) Hydrate	TCI E0393	0.10
B	Citric Acid	Citric Acid	1.02
B	Ethoxydiglycol	Transcutol CG	10.00
B	Butylene Glycol	Butylene Glycol	3.00
B	Alcohol	Alcohol 95%	3.00
B	Jajoba wax PEG-120. Esters	Corum 9126	0.50
B	Ethyl Ascorbic Acid	Corum 9515	2.00
B	Preservative	Preservative	q.s
C	Octoxynol-11 (and) Polysorbate 20	Corum 9111	0.30
C	Fragrance	Fragrance	q.s

Appearance: Clear

pH Value(25°C):4.09

Viscosity (S64 / 100 rpm / 25°C / 60Sec): 150 cPs

- 1 Pre-mix Part A mix well.
- 2 Add Part B ingredients in sequence into Part A, then mix well.
- 3 Pre-mix Part C then mix well.
- 4 Finally, add Part C into Part A/B.

- 1: Cyber Scan pH510
- 2: Brookfield viscometer LVDV-II+Pro

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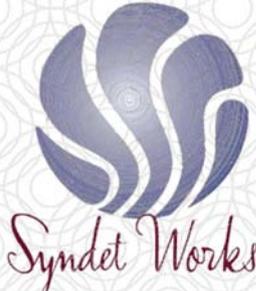
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How to design successful cosmetics

by Wendy Free

Living here in Australia, its often strange to experience what other cultures believe about us, and our Australian way of life. Disappointingly kangaroos don't roam every street and the 'bush' is not really a 'place'; happily though, 'the reef' is.

Recently while participating in an online forum at least three European based contributors expressed the opinion that "placenta was very popular in Australian cosmetics"; Ick! Perhaps many cosmetics made in Australia use placenta – but assuredly these are destined for export markets, and that the average woman on the street is looking 'cruelty free' products...

For the uninitiated, the Australian regulatory system for cosmetics is virtually invisible but once you get into it; unimaginably complex being light on documentation but heavy on accountability and obligation.

HERE are the basics

- Foods, cosmetics and 'drugs' are all managed by DIFFERENT federal government departments (who are yet to formally streamline the regulations).
- Cosmetics have a legal definition;

guidance is available¹

- Importers of cosmetics and their ingredients must be registered with NICNAS²
- NICNAS publishes the Australian Inventory of Chemical Substances (AICS)³; all ingredients in cosmetics MUST be included in this inventory, unless they fully qualify for an exemption (limited by purpose, quantity and safety)
- There is a requirement for ingredient labelling⁴

Then it gets complex...

- There are MULTIPLE resources⁵ that "should" be referenced to determine whether or not specific ingredients are restricted or prohibited, including (but by no means limited to...
 - Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)⁶
 - Australian Dangerous Goods Code⁷,
 - Prohibited Imports⁸...

(If you're looking at the links...you'll notice by now that virtually all of them are managed by *different federal government*



departments)

- Just about all of these use different chemical nomenclature, and international resources are referenced..
- There are requirements for labelling of addressees and "weight and volume statements", by – you guessed it; yet another Federal department (National Measurement Institute⁹)
- If the product is intended for 'workplace use' there are additional requirements¹⁰, overseen by yet another Federal government department.
- There are at least 3 different ways of legally supplying a SPF (Sunscreen) product in Australia, (As a Registered Medicine, Listed Medicine or Cosmetic sunscreen) and as a cosmetic is perhaps the least restrictive in terms

of allowable claims etc.

- There are two different ‘Organic Standards’ (One for internal use; the Australian Standard AS6000-2009 and one for export use; “the National Standard¹¹”; neither of these has full alignment with ‘international commercial logo’s’ or USFDA (and other) international organic standards....and to correctly, legally make an organic claim ALL of the supply chain must be certified, even the warehouses...
- Insect repellents (and pet products) are regulated by yet another authority¹²
- There are state based restrictions on some ingredients (for example honey, some health/herbal ingredients)

Once you actually have your product ready to go, there are a couple more things; one of which is “Mandatory reporting¹³” which requires EVERYONE in the supply chain to notify the relevant regulatory within 2 days of a ‘reportable incident’. The meaning of ‘reportable incident’ is debatable too; officially its “*Serious illness or injury means an acute physical injury or illness requiring medical or surgical treatment by, or under the supervision of, a qualified doctor or nurse*”, but is has been interpreted as asking a pharmacist for advice about an ‘adverse reaction’.... and it does not have to be proven to be your product, just suspected.

On a ‘happier’ note there are some requirements you might be looking for but not find including the

- Absence of requirement for ‘product registration¹⁴’
- Absence for mandated quality standards on colourants / ingredients (makes me cry!)
- Absence for requirement for GMP... you can make them anywhere¹⁵ (Scary!)
- Absence for the requirement of any particular skills, chemistry knowledge, health, biochemistry, microbiology background etc (Scariest still)...anyone can make, sell and distribute cosmetics

So when professionally evaluating products for their suitability in Australia, what have I found?

Primarily and without doubt ‘extracts’ are the most dangerous; most of us have no idea what is actually in these, and while they can do lots of ‘good’ things, the suppliers’ are not going to tell you about the possible bad...Typically, about every 12 months I come across something **really scary/toxic** that has been added to a cosmetic. It might be orally toxic, and thus only an issue if its swallowed, or it might be a known source of toxins or very potent drug analogues, just checking the INCI and the AICS is not going to tell you this!

Next up is ‘unsuitable preservative systems’; where the demonstrably safe, effective and low irritant preservatives (yes I mean parabens), have been removed and replaced with another product that might be ‘an extract’ (see above) or a ‘nice sounding chemical’. There problem here is that these nice sounding chemicals are usually narrow in their efficacy, formaldehyde releasers and/or very formulation/pH dependant, and unless you understand the chemistry of the system....it’s not going to work. Recent publications also indicate that when it comes to clinically demonstrated sensitivity to preservatives, the Australian population has double the rate of adverse reactions compared with Europe¹⁶.

Claims for ingredients; sellers of cosmetic ingredients frequently make ‘therapeutic’ claims for their wares, ones that can’t be used in the ‘open market’ for product differentiation. This causes heartache for a number of new players.

Recently I’ve had the opportunity to evaluate quite a number of different SE Asian designed and manufactured products, destined for our domestic market. While this is by no means a comprehensive survey, there appears to be three common, underlying themes...

Firstly, consideration of irritants appears lacking in formulation design...

- Fragrances don’t appear to be formulated to IFRA Guidelines. *Yes I know this is not ‘required’ but it’s a really good idea!* We already know that our population, for whatever reason is sensitive to ‘allergens’, its not a good

idea to perpetuate the problem.

- Essential oils and botanical extracts are added without consideration for IFRA, EU allergens, SUSMP or even ‘published safe levels’...again an area for potential irritation.
- Preservatives are added in excessive quantities, well above EU recommendations (again not ‘specifically stated as restricted’ but it is ‘implied’ and again a really good idea).

Next, Products that are regulated here, such as organic, insect repellents, sunscreens etc are ‘lumped in’ with ‘general’ cosmetic products; and once they arrive, they can’t be sold because they don’t comply in their design, accountability and manufacture. (Note that this also applies to organic cosmetic ingredients if they are to be exported).

And finally, formulators underestimate the ‘sophistication’ of the Australian consumer when it comes to choosing cosmetic products. We might not be able to tell ‘natural from synthetic’ or ‘saturated from unsaturated fat’ (my coconut oil jibe here), but we DO know quality.

While there will always be a market for cheap or gimmicky products, the day-to-day purchases that form the mainstay of our marketplace are squarely focused on quality, efficacy, safety and identity, so despite the apparent lack of laws demanding compliance, the Australian market demands quality.

Thank you Australian consumers.

Please note that the advice here is general in nature and is not in any way a comprehensive or all encompassing picture of the regulatory environment. For questions or concerns about this or any matter please feel free to contact me, obligation free talktous@qualitymatterssafetymatters.com.au

Mrs Wendy Free B.Sc M.Tech Mngt MASM MRACI FAOQ

References

- 1 <http://www.nicnas.gov.au/chemical-information/cosmetics>
- 2 <http://www.nicnas.gov.au/about-nicnas/about-us/industry/nicnas-registration>
- 3 <http://www.nicnas.gov.au/regulation-and-compliance/aics>

continued on page 46

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- › Water Testing

Microbiology

- › TAMC
- › Yeast and Mould
- › Staphylococcus aureus
- › Pseudomonads
- › Preservative Efficacy Testing

continued from page 45

- 4 <http://www.productsafety.gov.au/content/index.phtml/tag/ingredientslabelling>
- 5 <http://www.nicnas.gov.au/chemical-information/cosmetics/appendix-f>
- 6 <https://www.tga.gov.au/publication/poisons-standard-susmp>
- 7 http://www.infrastructure.gov.au/transport/australia/dangerous/dg_code_7e.aspx
- 8 <http://www.comlaw.gov.au/Series/F1996B03651>
- 9 <http://www.measurement.gov.au/Pages/default.aspx>
- 10 <http://www.safeworkaustralia.gov.au/sites/SWA>
- 11 <http://www.daff.gov.au/aqis/export/organic-bio-dynamic>
- 12 <http://apvma.gov.au>
- 13 <https://www.productsafety.gov.au/content/index.phtml/tag/MandatoryReporting>
- 14 Ingredients need to be 'registered and reported with NICNAS' but not the actual finished products.
- 15 Some ingredients like ethanol need a permit and dangerous goods may require facility registration.
- 16 Australasian Journal of Dermatology (2013) 54, 31–35

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formulator's forum

Part 2 –



Marketing vs R&D

by Ric Williams

This column has been prompted by a blog started on a Linked-in site “The in-cosmetics Group” titled “Why is there always conflict between R&D and Marketing Departments?” by Belinda Pilmore (IPCS)”

Since the publication of Part 1 I have had a number of conversations with friends that say “I know who that is”, or “I don’t want to admit what category I am in”, but the feeling I have come to is that there is another category of R&D Chemist that I did not describe earlier. This is: **“The Platters 1955 #1 Hit” Chemist**, I am not going to give it its real nickname for obvious reasons – you look it up.

This is the formulator that is usually not a chemist, certainly not a born and bred R&D Chemist but has gotten into creating formulations via that infamous “quirk of fate”. They do work in a lab but most times that is not their primary role. The Pharmacist that uses the Australian Pharmaceutical Formulary (APF) as the basis of their formulations is a classic example (but there are others).

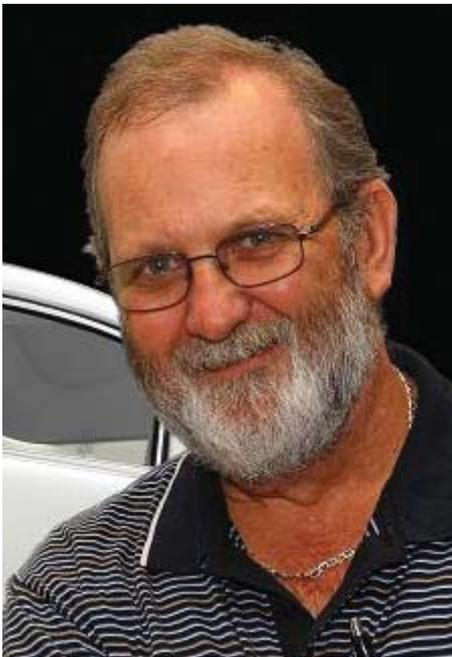
NB: Pharmacists are not chemists and chemists are not pharmacists; by training.

Via another quirk of fate they can sometimes produce good formulations (remember the APF has the basic formula for Listerine). *Again I won’t tell you which is Listerine but it is not too hard to spot.* Formulations based on Sorbolene Cream, Aqueous Cream and Cetomacrogol

Cream are obvious starting points. Also good starting points are formulations from raw material suppliers, and these can be mixed and matched to suit the purpose, using levels of actives as recommended and not exploring the “wot if” principal (they did not discover that levels of aqueous Ascorbic Acid, greater than 7%, are skin whiteners, or adding extra emulsifier to an unstable formula is not always the right way to go). These are the formulators that, rather than start with a sunscreen active system and build a cream around it, start with a good moisturising cream and add sunscreen actives; then wonder why, most times, it doesn’t work (ie. you don’t get the predicted SPF). Time in a lab helps improve their success rate, but as their main role is not a formulator this takes considerable time to achieve.

I remember the wise words of one of my mentors “If you know what you are doing it’s a science; if you don’t it’s an art!”

Then there is an equivalent marketing person but this is too complex to describe here, often mistaken for the “Yuppie”, “No ideas” **and** “Been there done that” marketing persons, but with



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

obvious differences.
Now back to the article.

Interaction between Marketing and R&D

From a paper by Aran Puri “What Marketing and NPD want”, SPC Magazine Sept 2010, he lists the major problems marketing have with R&D. These are;

1. Project timing

This is the biggest gripe! They claim that R&D is never fast enough. They want to see a product ready in three months and R&D want 12 months to develop a product. They say R&D quote a host of excuses... ok reasons. Why doesn't R&D discover ways to complete projects much more quickly?

2. Risk taking

They claim R&D don't want to take any risks and always quote the safest option.

3. Bureaucratic

R&D is very bureaucratic and so overcautious that they are a pain to work with!

4. Relationship

Marketing want R&D to be proactive, give positive support and take the lead to inspire them as an equal member of an inter-disciplinary NPD team . . . someone who really understands their needs by presenting extraordinary ideas.

A response is (from an R&D person – me):

1. Project timing

R&D investigates the unknown so how do you put a time frame, let alone a short time frame, on that. The request may be for a simple outcome and the

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

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time frame achieved, but if the request is complex and a short time frame imposed failure to meet this time frame invariably results in complaints that R&D is too slow.

The converse is, R&D complain that Marketing set a launch date, without consultation, and squash everything up to meet that date, hence they are the cause of the problem.

Proper communication in the beginning may avert this cause of conflict.

2. Risk taking

R&D takes the safest option only when they have a low budget. R&D budgets are rarely discussed when NPD starts. If the initial discussions involve how much R&D will cost with internal and external costs estimated, both for the “safe” option and for the “innovative” option, then there may be some understanding and the risk level adjusted.

3. Bureaucratic

This bureaucratic attitude may be forced on R&D by government legislation or regulation, and marketing must be told if this is the case.

I also find that many larger companies evolve into bureaucratic nightmares, just because of their size. No one is then game enough to move quickly or think outside the square, and even if one or two did, no one would notice. I missed a job once when a “Yuppie” marketing person worked out I was someone that did not entertain fools very easily (curse my ADHD R&D personality), hence vetoed my application saying “I would not fit into the company ethic” and “not cope with the personalities there”. He was probably right as I would have become frustrated with the slow pace.

4. Relationship

Companies should pick horses for courses. From my description of R&D personalities above companies should have a mix of R&D available, so pick the “Backroom R&D”, or “Marketing R&D” if you want real innovation, but sometimes when you want the safest

option pick the “Draught Horse R&D chemist”. If you don’t have the right R&D person, contract them, as picking the wrong R&D person can be disastrous. From above, first and foremost, know who you are dealing with and their personality and act accordingly. Also, to be honest, I can’t see this complaint being justified coming from the wrong type of marketing person.

If we take the story about the balloonist (from Part 1) then the key idea we should take out of this is that **proper communication is of utmost importance**. The balloonist asked the wrong question in that he was not specific enough, and this caused an answer he did not want. The question should have been “*Excuse me, can you help me? I promised a friend I would meet him an hour ago in XYZ. Can you tell me what town I am near and how far and what direction it is to XYZ?*” To this the R&D person would have given him the answer he was after. On the other hand the R&D person on the ground was incorrect in that he gave an answer that was inappropriate not knowing the ability of the balloonist. The R&D person should have asked more questions before answering, like *where do you want to go to?*

The quality of the question determines the quality of the answer. More examples are:

Firstly I have seen the case where people do not ask the question they don’t want the answer to. I have seen data from Be Cruelty Free International where they claim greater than 80% of Australians favour a ban on animal testing. I don’t disagree with this however, what Be Cruelty Free International did **not** ask was the reverse side where Australians should have been asked that if such a ban were to be introduced would Australians accept a reduction in the quality of future innovations of new and improved cosmetics, some that may be “necessary to protect human, animal, or plant life or health . . .”, as a price they would be prepared to pay. A perfect case of selective questioning.

Secondly I recall a theory put forward

where you ask the question in a way that the desired answer is assured.

If you ask the mild set of four questions;

- 1a Do you believe in our ability to defend ourselves?
- 1b Do you believe we should protect others that can’t protect themselves?
- 1c Should we send young soldiers on humanitarian missions overseas even though it might be dangerous?
- 1d Do you believe in conscription?
... you will get a different answer to part d if you ask a more aggressive set of questions;
- 2a Do you believe in war?
- 2b Do you believe in invading other countries?
- 2c Do you believe in sending our young soldiers to die in overseas conflicts?
- 2d Do you believe in conscription?

This may be extreme but I think you get the point.

Both of these cases are wrong if you want to be sure of what you are doing. Be careful!

When starting a project and answering questions at the first briefing it is always better to alert everyone as early as possible, if you think there is a possible problem. If this is the case then this problem can be sorted before spending time and money and finding out later the project cannot proceed. Everyone should be concise and accurate (no emotion), while the technical/purchasing/production side should indicate, through a feasibility study – yes it is feasible or no it is not feasible. Not only that, if it is a close call (line ball decision) the study should indicate that to succeed it will take X months and cost \$Y. The decision is then thrown to management (the umpire) who may decide the risk is too great or that there may be some corporate strategic reason to proceed.

Then there can be no blaming anyone at a later date ie no conflict between marketing and R&D.

Remember “many a beautiful idea has been destroyed by an ugly fact” and “if no one else has done it before; there may be a very good reason” but, unfortunately

on the other hand we find the attitude, “nothing is impossible to the man that does not have to do it himself”.

I remember working in a R&D lab where the R&D Manager wanted to play a joke on the marketing person (a Been-there-done-that type). The R&D Manager got me to make two bars of soap, one white and one black, then carefully cut each into squares and reassemble a bar in a chequerboard pattern. This was casually left on the desk of the R&D Manager when the marketing person was due. Well I believe his head revolved three times (a la the Exorcist). Very funny at the time but unfortunately it took us six months to convince him that while technically we did it, it was not commercially feasible. We also were in fear that if the supervisor on the soap production floor ever got wind of what we did he would have had our private parts on his office wall, as the marketing person pestered him as well, looking for that new magic product.

Note to oneself – Don’t joke! The recipient may not understand.

Project Champion

In any successful project you must have a project champion, one that believes it is going to work, **no**, is sure it is going to work, and will move hell and high water in order to push it to the limit. Without this “champion” no project will survive.

As you will notice I have not mentioned whether this is a marketing person, an R&D person or management, as it can be either (or all). If it is all – then you are guaranteed a success, two out of three – more than likely a success, one out of three – possible success, none out of three – no chance. But if you would have to pick one then it is management (the boss) as everyone reports to him/her and relies on him/her for job security. I must remind you of the “Golden Rule”, that “He that has the gold, makes the rule”. Second option is marketing and only because they generally have the money to back the idea, by being awarded a bigger budget. Working in R&D for 45 years I can assure you that an

R&D budget for new ideas, is pathetic. Usually less than 4% of Net Profit is given to R&D in total and the majority of this is spent working on “sure things” so we can survive another year.

Appropriate here is an old prayer I think you may find on the notice board of many R&D labs;

*We the willing, led by the unknowing,
have been doing so much, for so long, with
so little,
we are now qualified to do anything, with
nothing,
in no time at all, and for no reward.*

Another fact is that when a company is under financial stress you will find that R&D is the first to be cut. Bean-counters believe that R&D do not earn income but are only an expense, and cannot see that R&D is necessary for the future success of the company. Without investment in R&D, yes this does make the bottom line look better in the short term, but then when the company is in a stronger financial position they find they have nothing new to put to customers and recovery is stalled.

The conclusion, to this, is that the project champion should be the most financially stable.

An interesting anomaly is reported from companies such as L’Oreal or Shiseido where they invest around 45% in R&D and they continue to be market leaders in innovation. This also makes life easier for the marketing person, even the No Ideas marketing person. I think there is a lesson there.

As a last anecdote, many years ago I had a friend that had just got a job at the local brewery. He was worried that he knew little and felt he had to make a name for himself. Over a drink one day he asked me what he should do and my reply was to go down to the laboratory and ask what beer the technicians made for themselves, knowing that all chemists have their “private” formulae that will probably never see the light of day, for many reasons, not least of which was that the old marketing people never trusted non-marketing people. Having done this, my friend launched this beer (the first mid-strength beer on the market),

and it was a great success. My concept of having multiple “champions”, in this case himself (marketing) and the technical staff, hence “two out of three – more than likely a success”.

Project Leadership

But who should be the project leader? In my opinion none of the above; but a “team” should be the leader and this team should be involved from start to finish!

Compose a team that consists of one person from each department involved and then you will find you have many that will feel ownership of the project and therefore multiply your “project champions”.

There is nothing more demoralising than to be given a small piece of the puzzle to solve and then never hear of the outcome, until it is announced a success or failure, and be left wondering if you contributed to that success (or failure). If it is a success and you see the marketing department have a dinner or overseas trip to celebrate that may anger others who are probably less inclined to put 100% into future projects (sales conferences also fall into this category), whereas if it is a failure you will be left wondering who is going to get the blame and this is more often felt by the technical staff (the “expendables”). Marketing people should understand this.

Also, of prime importance, it should not matter who thought of the idea, who was first or who was second, because if management agree to pursuing the idea and the “team” is inside **all** should rejoice in any success.

The concept of “my idea” should be discouraged and “our idea” promoted.

In conclusion I must also remind all readers of an extension of “Murphy’s Law” – the “**Peter Principle**”.

That is the theory that “*in any organisation, do your job well and you will be promoted, but rise to your own level of incompetence and then stay there*”.

The corollary is that “*all work is done by people that have not yet reached their level of incompetence*”.

continued on page 52

sunscreen highlights

by John Staton

Investing in high yield

Here is a question...

“What SPF yield should I expect from my sunscreen formulation?”

SPF Yield is defined as the SPF per percentage of total actives included in the formula. It is of importance in terms of maximising efficiency of formulations, usually with the objectives of minimising

Formulations published by Raw Material Suppliers			
Supplier	SPF	Actives %	Yield
A	60	25	2.4
A	50	25	2.0
A	35	20	1.8
A	30	15	2.0
B	75	20	3.8
B	89	24	3.7
C	18	13.5	1.3
C	30	23.5	1.3
C	45	22	2.0
D	30	22.5	1.3
E	50	27.5	1.8
F	36	10	3.6
F	28	9	3.1
G	50	23	2.2
G	50	20	2.5
H	30	13	2.3
H	50	20	2.5
		Mean	2.3

Fig 1. Published Supplier Formulas

cost, reducing the influence of UV absorbing chemicals on the aesthetic properties of the formula and potentially reducing any perceived risks associated with higher levels of actives.

Last year, we asked the manufacturers of SPF actives to give us their expectations and those who replied indicated that a yield of from 1 to 2 should be the expectation.

A review (fig 1) of the sunscreen raw material suppliers published formulations in our tech files showed, for those “starting formulas” where *In vivo* SPF testing had been performed, the average SPF yield was 2.3 and the highest was 3.8.

Examples where the true SPF yield is established beyond doubt can be found in the ISO standards (fig 2). They are...

Formulations published in ISO Standards			
Reference	SPF	Actives %	Yield
P2	16	10%	1.6
P3	15	6%	2.5
P7	4	8%	0.5
S1	20	13%	1.5

Fig 2 ISO Standard Reference Sunscreens

A survey of Primary sunscreens in the High and Very High Protection TGA categories (1) is shown in (fig 3 overleaf).

This indicates that the testing of most sunscreens results in the certification of yields of 2 to 3 for the majority of products Listed with TGA. There are a few outliers, well in excess of this. Dermatest has not seen numbers this high for typical o/w or w/o emulsions or alcoholic sprays. Certainly sticks and other forms of volatiles free sunscreens can exhibit higher SPF yield, as their dried down film thickness will be the same as applied i.e. 2 mg/sq cm = 20 microns, rather than 10 micron for 50/50 emulsions and as low as 4 microns for sprays.

“Synergy” is commonly used as the explanation of higher yields for combinations of actives. However, this must have some maximum! Does a theoretical limit exist? I have asked this question to many experts – but so far, no offers? Perhaps an excellent project for a forum!

A clue to SPF can actually be found in the measurement of UVAPF according to the ISO 24443 method (2). Whilst the reliability of *In vitro* SPF testing is not established, the “C” value ie. confidence of match between *In-vivo*(3) and *In vitro* SPF is a reasonable indicator of the SPF range for traditional emulsions, but not reliable for sticks or formulations with

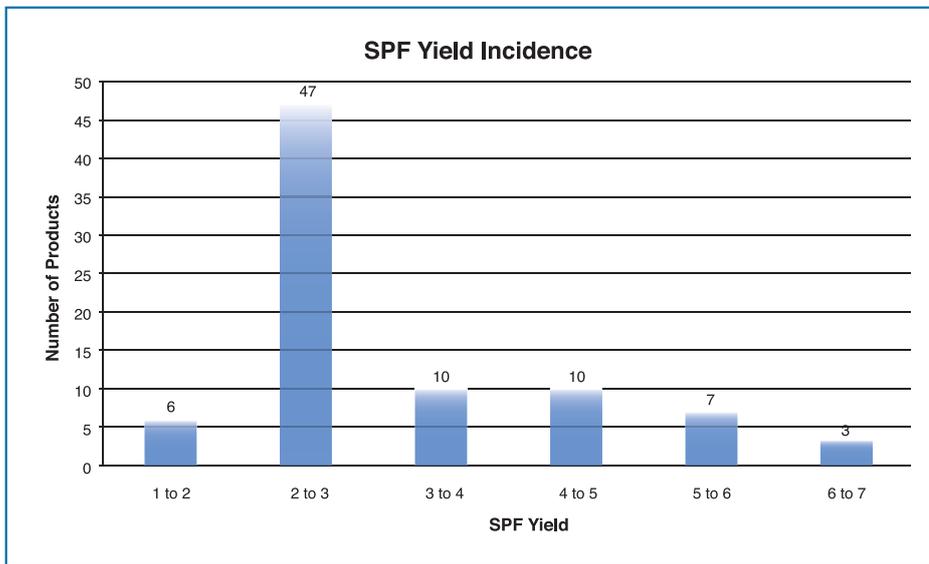


Fig 3. Yield for SPF 50 and SPF 50+ Sunscreens listed with TGA (n=77)

high volatiles. Where one active such as Avobenzone is the only or major contributing UVA absorber (as is often the case), the extinction coefficient is essentially linear around 360 nm and, if apportioned to the UVA/UVB ratio (2), may be used as another comparator to relate *In vitro* to *In vivo* SPF. That is to

say, if the UVAPF/SPF ratio is one third, as is required, then the UVA absorber would need to show an extinction “contribution” at 360 nm of at least 1 for an SPF 50 sunscreen i.e. at least 3% Avobenzone.

Major international brands seem to typically achieve a yield of 2 to 3. This

can be easily surveyed in any pharmacy or supermarket, and is particularly evident in the US market, possibly due to the limitations of choice and permitted levels of UVA absorbers, as this spectral region does impact on SPF performance.

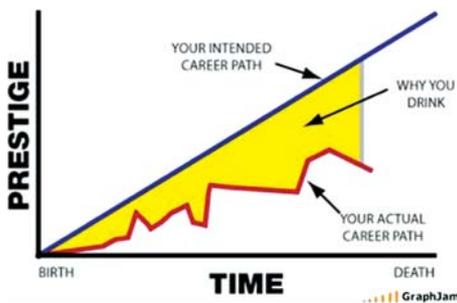
So, why is it that some products can claim numbers much higher than this? At Dermatest, the highest yield we can identify, for a typical sunscreen emulsion, from our testing over 15 years is almost 4 for a Very High Protection formulation (SPF 60 or above). The author would welcome evidence that yield numbers in the order of 7, or above for high SPF formulations are supported by multi-centre test results.

References

- 1 <https://www.ebs.tga.gov.au>
- 2 ISO 24443 – Cosmetics – Sun protection test methods – In Vitro Determination of Sunscreen UVA Protection (UVA-PF).
- 3 ISO 24444 – Cosmetics – Sun protection test methods – In-vivo determination of SPF (Sun Protection factor) Published 2010

Formulator’s forum

continued from page 50



I read an article recently “The Peter Principle Explained” where the author explained the difference between Specific scope and General scope of the person. His hypothesis was;

“Understanding the Scope trait can go very far in allowing you to avoid the Peter Principle.” or more specifically, “Specific people are extremely over-represented in middle management, because they perform so well during their entry level job. These people handle detailed information very well. They understand sequences of events, procedures, rules, and how each part of

a complex “thing” works. They do not need to understand **why** that “thing” works, or **how** that “thing” works with other “things.”

Interrupt a specific person, and they will continue from exactly the spot where you interrupted them, or shake their head and go back to the beginning. A specific person excels at almost all entry-level jobs, where there is a supervisor handling the **why** and **how** questions.

A person with a very strong General focus, needs to learn how to get in the weeds and work with the details. Breaking up those focused times with short breaks or general-oriented tasks will make the details less painful. Get through the first few years of drudgery, developing your Specific skills, and you will be rewarded with a management position more suited to your General trait.”

Sorry if I upset anyone by inadvertently describing them in this or I hope I have amused some by describing people they have met (but possibly may

like to forget), but this concept of “Why is there always conflict between R&D and Marketing Departments?” should be discredited, it is not “always”, and times where it does happen is usually due to poor communication and inconsiderate attitudes, things that can be rectified easily.

I could go on with R&D vs Production, or R&D vs Purchasing or even Marketing vs Production and Marketing vs Purchasing, let alone Finance vs the Rest, but that is for another time.

Thank you

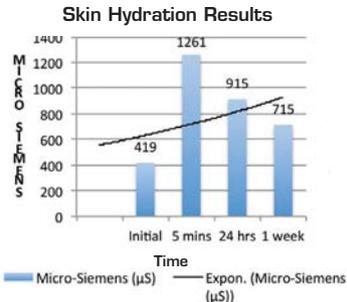
Next issue I will return to a discussion on “Hair Care Products”

CELLULAR EXTRACTION™ of the world's highest

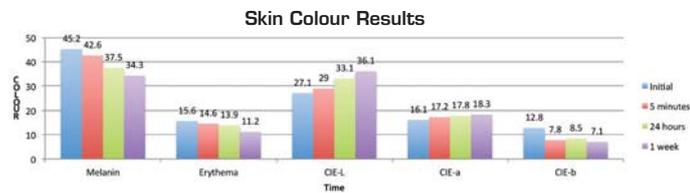
source of Vitamin C

70+% improved hydration

Measuring the conducting properties of the very upper layers of the skin when subjected to an alternating voltage, the electrical impulses quicken due to an increase in hydration of skin from twice daily application of the NE KAKADU PLUM Extract.



Whitening/Brightening, Redness Reduction & Depigmentation



- 24% Pigmentation reduction**
- 28% Redness reduction**
- 25% Increase of lightness**
- 12% Increase in whitening**
- 45% Decrease in dark spots**

Melanin is the pigmentation index of the skin. The higher the value the more pigment.

Erythema is the redness index of the skin. The higher the value the more redness.

CIE-L : lightness of colour - the higher the value the whiter the skin.

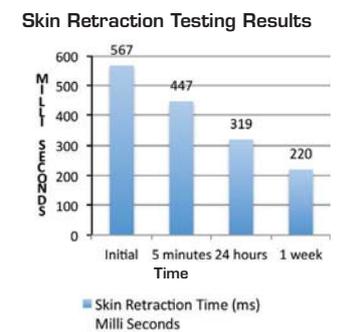
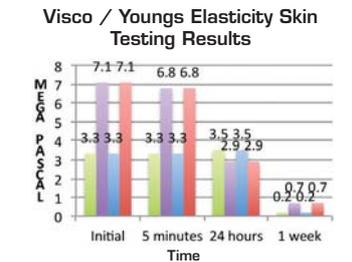
CIE-a : whiteness of skin - the higher the value the whiter the skin.

CIE-b : darker pigment - higher the value the darker the skin.

60+% improved elasticity

In addition to hydration and smoothing, skin elasticity is an essential factor in reducing the aging process. Skin Elasticity depends on the collagen filaments in the skin that recede with aging. Measuring elevation & retraction phases of skin correlates to health, firmness, collagen stores, wrinkles & overall condition of the dermis.

The Visco/Young test shows a 90% decrease in skin elevation time, & 60% in Skin Retraction indicating improved quality. Young, smooth skin, which is well moisturized, will have short elevation times and will retract quickly. NE KAKADU PLUM Cellular Extract demonstrates that mature skin can return to a firm, well moisturized condition.



The most powerful **KAKADU PLUM Cellular Extract**

- > World's 1st **STABLE** natural Vitamin C
- > Potent natural antioxidant
- > Reduces Wrinkles & Improves skin texture
- > Enhances Brightness, radiance & luminosity
- > Increases Collagen Synthesis
- > Improves elasticity



RAPID Wrinkle reduction

Smoothing & Firming Action

100% of the subjects reported positive effects



Male subject (50) applied NE KAKADU PLUM CELLULAR Extract (Concentrate) twice daily for 7 days



One of the most powerful functions of Vitamin C is its role in the production of collagen, a protein that gives skin its elasticity. As you age, collagen breaks down and wrinkles begin to form. Stabilizing your skin's levels of Vitamin C can help to counteract wrinkle formation by increasing collagen production.

The only 'True to Nature' multifunctional extract

NATIVE EXTRACTS
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Australia innovation and an untapped mega-diversity creates the

NEW Super Extract

Australia is at the forefront of new advances and discoveries that are changing the way the world understands and uses botanical extracts forever. In a quest to find better ways to capture the powerful phyto-activity that exists in nature and deliver it in a stable medium for formulators to develop more potent Natural/Organic products, new extraction technologies like Cellular Extraction are emerging and redefining what the botanical extract is and can offer, giving us the first real “True to Nature” full range of phyto-active compounds, far greater naturally derived potencies, and new independent scientific data to prove it. The extract industry will no longer need to fall back on synthetic standardization for the illusion of botanical activity.

Australia is one of a handful of continents that are considered mega-diverse, and represents an enormous untapped reservoir of phyto-active compounds and new discoveries that will have a significant impact on the direction of natural skincare.

The botanical extract industry is evolving in response to consumer demand for natural/organic sources,

verifiable analysis and transparency of ingredients. We are seeing more extract companies opt for synthetics standardization to mimic because their processes cannot harness natural compounds. Past methods of extraction (maceration, percolation, freeze dried powders, spray dried powders) are destructive to the integrity of phyto-active compounds, subjecting the plant’s

cells to stressful conditions such as extended periods steeped in solutions, heat, etc; degrading compound bonds and rendering them inactive, and extracts of decaying plant matter and preservative.

The impact will be seen in the rise of natural products powered by real natural compounds that are far superior and bio-available than their synthetic alternatives.

CELLULAR EXTRACTION: new science for “powered by nature” cosmetics

What is CELLULAR EXTRACTION?

An Australian innovation, by NATIVE EXTRACTS, that rapidly alternates static and dynamic stages within a closed system, creating an equilibrium between a plant cell and the liquid medium that simulates the cell environment, allowing access into the cell wall to diffuse the phyto-active compounds into the liquid medium, without stressing or degrading the plant’s biomatrix, delivering the full plant profile of water soluble or oil soluble phyto-compounds, as they exist in nature.

NOW we have a technology that gives us exactly what is in fruit, leaf and wood.

NATIVE EXTRACTS are working with the plant from a completely different perspective: understanding how compounds are stored, what systems operate in a plant, cellular composition, liquid mediums, environmental stressors and plant behavior to arrive at a technology that respects, works with and mimics these mechanisms.

Apply this to highly evolved botanical species and we achieve a whole new playing field for Natural Cosmetics.

Evolving the botanical extract

First stable and active NATURAL Vitamin C

NATIVE EXTRACTS' Cellular Extraction has achieved what was once thought impossible – to harness and stabilize pure RAW Vitamin C, transferring it through the cell wall of the Kakadu Plum into a liquid medium mimicking its cellular environment.

Natural Vitamin C is a highly unstable molecule making it a powerful water-soluble antioxidant and free-radical scavenger that helps prevent cell and tissue damage.

Past extraction processes cannot



prevent the rapid oxidization and dissipation of Natural Vitamin C, but NOW the new CELLULAR EXTRACTION gives formulators the opportunity to work with a Vitamin C as it exists in nature, stable and ACTIVE in it's unstable format ready to perform. NATIVE EXTRACTS' Kakadu Plum Extract delivers unparalleled

natural ACTIVE Vitamin C, with 3700mg/100g. Certified Organic and marked to spearhead the trend in powerful “true to nature” cosmetics, supported by recent clinical trials posting unprecedented rapid results in hydration, elasticity and brightening. NOW we are going to see exactly what Vitamin C can do for skincare with this superior extract.



NEW SUPER ANTIOXIDANTS

CELLULAR EXTRACTION of Australian native species is setting new benchmarks in antioxidant levels as NATIVE EXTRACTS' focus is on pioneer species, that have adapted over millions of years in some of the world's most extreme environments. They've evolved highly efficient mechanisms to store large amounts of the phyto-compounds they need to survive their unpredictable existence. NOW

CELLULAR EXTRACTION can access vast stores of phyto-activity. EG. the Tasmanian Mountain Pepper Leaf Cellular Extract rates an ORAC over 3200, out performing global benchmark, Vitamin E, at 585. Australian natives represent an untapped source of potent antioxidants.

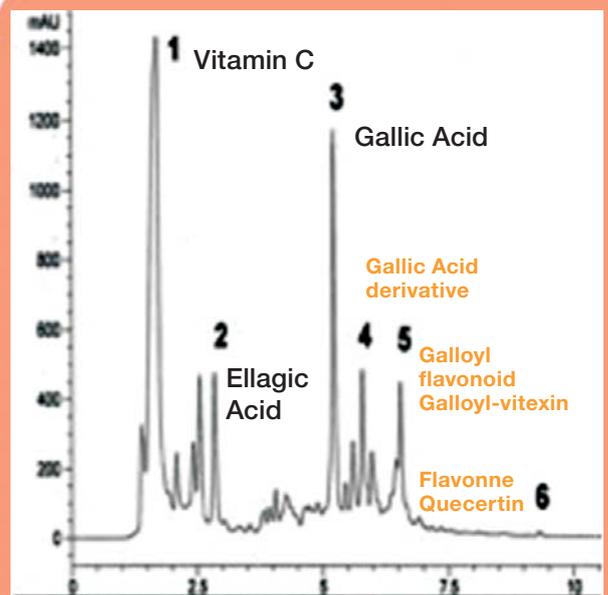
“TRUE TO NATUE”

Full Plant Profiles

The new science of CELLULAR EXTRACTION can deliver the full plant profile, including their derivatives, of any fruit, leaf or wood for the first time. NATIVE EXTRACTS' believes that the power of nature is derived from the synergistic relationships between the compounds within it's cells and if you are truly doing a full water soluble extract you must be able to bring over the full range of water soluble compounds and not isolate one or some of them. Botanical extracts should offer independent LCMS to verify they represent the true source. Standardised extracts are a synthetic cocktail attempting to mimic nature. NOW the Botanical Extract has evolved to deliver the nature's power that comes from the sum of its compounds; the reason they co-exist in nature, to support, buffer and boost their activity. **One extract, with many actives offering multiple functions.**

For more information on CELLULAR EXTRACTION and over 70 NEW ORGANIC Australian Native Botanical Extracts: www.nativeextracts.com

ANF0013 NF Kakadu Plum Extract



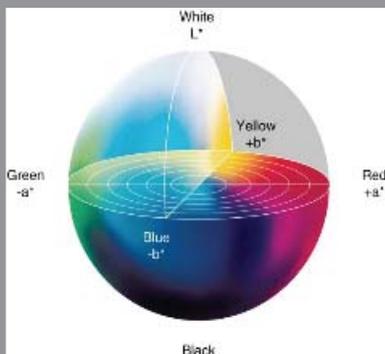
Independent LCMS: All extracts are tested at Southern Cross University Plant Sciences laboratories, Australia.

Stable activity for 24 months

STEPS



1. MEASUREMENT



2. L*A*B* COLOUR SPACE



3. VISUAL CHANGE



No. 17 Skin Lightening Study

Spectrophotometer measurement of skin colour change together with Photographic Support

Supportable Claims

- Visual signs of Ageing
- Eliminate sun spots, age spots and discoloration
- Repair visible sun and photo-ageing damage
- Helps fade dark, age and liver spots
- Evens skin tone and color
- Depigmentation factor

Measurement

Age spots and blotches contribute to the unevenness of skin associated with ageing. The consumer's expectation is the reduction in skin colouration of overly pigmented areas and the most appropriate measurement is associated with defining colour change. For this purpose, a chromameter is used. The instrument works by projecting tristimulus light (similar to an overhead projector) and recording the colour values into an interpretable scale – $L^*a^*b^*$. These values are arrived from the C.I.E. standardised three dimensional colour space model, where L^* is the "grey" scale i.e. whiteness -blackness, a^* is the redness - greenness value and b^* is the yellowness - blueness. This is not dissimilar to the wheel for colour selection in computer software such as Microsoft Word.

The L^* value represents the Lightening (clarity) measurement but it is modified by the a^* and b^* values according to skin type as seen in the

background colour of an adjoining non-pigmented skin area. In general L^* decreases whilst blueness b^* and redness a^* increase with chronological age(2)

These types of studies can be supported by high resolution photography, which serves to support the visualisation of change. The slow acting nature of non-therapeutic formulations usually means that a study over 4, 8 or 12 weeks will be needed in order to show statistically significant change. The preferred season for performing the testing is the Northern or Southern hemisphere Winter, where actinic light is at its lowest. This gives the best opportunity to make the measurements without the interference of suntan which will cause changes to the colour of the background unpigmented reference skin areas.

Assessment of Change

Change can be quantified as numerical change e.g. ΔE or to express percentage over time, e.g. "90% of users showed more than 55% reduction in intensity of deeply pigmented spots after 60 days use."

References

1. Nava D. Skin Ageing Handbook :An Integrated Approach to Biochemistry and Product Development William Andrew 2008
2. Jemec G.B.E., Serup J. Handbook of Non-Invasive Methods and the Skin 1995 p385 -395.



John Staton is founding Director of Dermatest Pty Ltd, Sydney, Australia and has been conducting SPF testing and skin efficacy and evaluation studies continuously since 1997.

PROMPT, PURE PERFECTION

COSMETICS THAT MEET UNIQUE NEEDS

At Merck, we believe that the perfect blend of science and artistry makes the most beautiful cosmetics. And as a market leader, we also know just how cosmetics industry is changing. Cosmetic ingredients, then, are competitive differentiators. We put them at your fingertips by delivering on a threefold promise we make to each of our customers. Across our wide portfolio of pigments, functional fillers, active ingredients and insect repellent, all of our raw materials are pure. Our top-quality product portfolio covers every need - wherever your target market is - with plenty of ways to create eye-catching cosmetics, achieve perfect complexion, protect your skin or keep your skin young and healthy. The following products are sure to inspire:

RonaFlair® Balance Green

– one of the younger products in the RonaFlair® line, Balance Green works with the natural physical properties of light and color to even out skin tone. People of all ages with skin redness from blemishes or irritations can count on this ingredient to counteract unwanted discoloration without feeling they've put on a mask. The skin radiates with natural look.

RonaFlair® Flawless

– this functional filler immediately reduces the appearance of lines and wrinkles. Bead-shaped particles roll into and fill out the wrinkle, dispersing light evenly in all directions.

The interplay of light and shadow that generally highlights imperfections is minimized to give an overall even skin appearance.

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In Cosmetics

Barcelona 2015 – next launch



Lipotec introduces EYEDELINTM marine ingredient, a new and innovative biotechnological active that tackles the three main problems of the eye area at the same time: eyebags, dark circles and wrinkles.

Get an impressive look in one touch

The look of the eyes is probably the most important facial feature at transmitting personal beauty and attractiveness. The endless combinations of colours and shapes make the appearance of the eyes very distinctive for each person, and are the defining feature of an individual's personality. The skin in this area is constantly subjected to high levels of motion, including continuous eye movements, blinking, and facial expressions, like smiling or squinting. Consequently, one of the first places where visible signs of aging begin to emerge is around the eyes. Wrinkles, eyebags and dark circles start to appear and special care needs to be taken to maintain a youthful, good-looking appearance and avoid an older, tired aspect.

A series of clinical tests at different doses demonstrated the capability of eyedelineTM marine ingredient to

diminish all the signs of tiredness and aging in the eye contour. By reducing fluid extravasation, it can ameliorate the appearance of eyebags and dark circles that develop as a result of liquid accumulation. This marine ingredient also enhances the degradation of bilirubin and contributes to reducing the vascular pigmentation that causes dark coloration under the eyes. In addition, the production of type I collagen and elastin by dermal fibroblasts is increased, reinforcing the dermis strength and elasticity and improving the skin tone and luminosity. Further, by decreasing damage caused by glycation, the functionality of matrix proteins is preserved, contributing to firmer,

smoother skin and offering an added anti-wrinkle effect. An in vivo test showed great visible results in only 14 days using a 4% application, and an 8.2% reduction in the volume of the eye bags after 28 days.

eyedelineTM marine ingredient provides comprehensive advanced eye care benefits as it targets the three main problems of the skin around the eyes in one ingredient.

[Visit us at ASCS at B00th #14-15.](#)

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For more information please contact Aran Santamaria, asantamaria@lipotec.com

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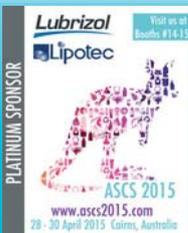
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14 days

28 days



Complete care for a brighter and younger look with just one active ingredient. **eyedeline™** *marine ingredient* targets the three main problems of the skin around the eyes at the same time: eyebags, dark circles and wrinkles. A series of clinical tests at different doses demonstrated its capability to reduce all the signs of tiredness and aging in the eye contour. An *in vivo* test showed great visible results in 14 days using a 4% application, and produced an 8.2% reduction in volume of the eye bags after 28 days.



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I AM STARVING. I don't mean "went-to-Aquarobics-no-time-for-breakfast-green-salad-for lunch-7pm-stuck-in-traffic" starving. I mean so malnourished I look like a marathon runner. How did it come to this pretty pass?

I was persuaded by the Greens that animals should not suffer for my vanity. I reasoned that rain-forests are being felled, and orang-u-tans and Brazilian fauna are losing their habitats, to produce the starting materials for making cosmetic ingredients. Or I am supporting the miners who supply non-renewable starting materials which may be used for the same purpose. All of this so that the cosmetic industry can manufacture frivolous cosmetics. So I stopped using soap, shampoo, toothpaste, antiperspirants, deodorants and shower gels. At first the results were gratifying. I felt as smug as a Prius driver. An unexpected benefit was that if I went in a pub I found that other people magically retreated from the bar. On crowded trains nobody sat next to me. The only downside was that Carole made me sleep in the spare bedroom.

I also became a vegetarian, of course. No more bacon and eggs at Rotary breakfast. So we began growing our own vegetables, until the cabbage white

butterflies, white flies, aphids, snails, possums, fruit bats and mice discovered them. This led logically to an agonising realisation. The food you buy in the shops has been grown by killing these so-called pests. Mice and weevils are killed to supply the wheat for our bread. Insecticides ("organic" or not) are used to kill insects. (What is the opposite of organic'?) These creatures have central nervous systems. Do they not feel pain? In any case they have their animal rights.

What about becoming a fruitarian? Apples would not be allowed because the orchardists have to kill Codling moths. Now for the ladies other fruits might be acceptable, even admirable, because the orchardists use fruit fly traps to lure the male fruit flies to celibate starvation. But what about the unborn eggs of the females? Surely this form of contraception would be offensive to Catholics.

So I tried eating kelp, but it is squelchy, gritty and the alginates made me constipated. Nori is more palatable, but there are only so many ways you can prepare it, and it has very low fat content. Moreover Gweilos do not have the enzymes to break down the polysaccharides.

SO I AM STARVING!

food for thought

by Dr Malcolm Nearn

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Dr Kitty is ready to rock you

by Margaret Smith

Before last week (now reading a month ago) I had an entirely different musing in mind.

Then I went to a brilliant seminar where 3 speakers talked informatively about the way changes in “grocery” FCMG (fast moving consumer goods) are rapidly taking shape. The room was full of people from suppliers providing a diverse range of products to the FCMG retailers and we all had plenty to take away and think about.

The first speaker began with the state of the conventional supermarkets and their devolution or even extinction, mainly everywhere else except Australia (for the present). The international figures and trends show a clear picture of consumers moving away from what we thought was conventional shopping (read supermarkets) to discount groups and digital online purchasing. The figures were actually startling, and I guess doubly so for those who own supermarkets.

Then with the next speakers revelations, I thought I had been sucked through a wormhole back to the 50’s or 60’s. So why?

Well, in the food sector, in the 50’s and 60’s, consumers or “housewives”(as

they mostly were at the time) were typically known to shop for food on a daily basis. Yep there were refrigerators (you may recall my musing on the way my mum used her fridge), but there was also a need to see what the butcher had specially prepared, the grocer had in fresh. And then there was the added social factor of getting out of the house for a bit of a walk and a natter to the other ladies and shop keepers. The socialising was the driver.

As you might imagine, daily shopping didn’t actually mean that there was new and innovative stuff to eat each day. Truth be told, the kids and hubbies of that era were very resistant to anything but fish and chips on Friday and if it was chops and three veg it must be Tuesday.

Today, food shopping is different but similar, in one important way. Nowadays we tend to think of what’s for din dins at the end of the day or while at lunch chatting to our friends...so meals still have the social aspect but, unlike the ‘pre internet’ era there is now a digital component where we can gratify our need to look up the latest of Jamie’s or Yottam’s recipes. Of course that isn’t where it ends and the next challenge becomes finding the store that has the



ingredients called for in the menu you have just chosen. Recipe books that are on-line and have followers, comments, blogs and links to stores for ordering make the shopping experience so much richer and different to those of us who grew up with either what Mum did or recipe books and maybe some TV.

Well it seems so obvious when I say it like that, and of course you will all say “I knew that”. Yes you did, but then I want to see the movers and the shakers in the cosmetic skincare world actually filling the gap between the technology that exists and the imagination to really make

it work for the customer. There seems to be three types of interaction.

- 1 The elegant seamless way to entice yet serve. The digital assistant who remembers you and then makes sure your purchases are ready and waiting for you...no queues and you are Special.
- 2 The clunky, the ding as you are walking around the store or and being told that “ding” xx on special.
- 3 The downright creepy when your phone knows where you are and tells you about it unnerving with too much contact.

Maybe there is the fourth. Just NOTHING. No contact even with heavy duty social sites that you log onto just because you want contact with your “friends” and NOTHING happens. Awful

Life is just not an instant or NOW type of life, just one that we do not have the time or inclination to prepare menus in advance. We still want company and contact and that’s why social media is SO huge. People want their say and they are sick to death of cold and soulless shopping.

So after the day to day type of shopping of the 50’s and early 60’s, the late 60’s and 70’s saw big supermarkets and shopping centres replacing strip shopping. With the rise of the supermarkets shopping entered a newer and more impersonal phase. Quite frankly, apart from the convenience, the customer experience of personalised service that prevailed in the 50’s and 60’s was largely lost. For different reasons the rise of the supermarkets also led to many suppliers having an equally poor experience as well.

Before the supermarkets opened up to extended trading hours we all did the BIG shop once a week. This was good for the supermarkets because we would all overbuy. Then throw it away or keep the odd food experiment for later. So except advertising agencies, for everyone else involved with supermarkets, the experience is on the edge of intolerable

Back to my mum’s shopping experience which was, on close

reflection, also about loyalty to an establishment and to brands she trusted. She only took advice from known and trusted sources that she spoke to and who knew her, like the pharmacist or butcher (you had to trust your butcher). Once established, the links of loyalty were strong and long lasting. Is it little wonder that the brands of our childhood seemed to be so durable?

Since we got hooked to our phones and the internet, relying on the online approach can fail when there are no links to get the goods. To create my wonderful Yottam dish that I discovered on TV, I needed to check his website to confirm some of the details. Having determined what was needed, it then took me ages to source some of the new and curious foodstuffs, as they certainly WERE NOT in my local supermarket. So instead of having the instant gratification I thought I might get from an online and then shop experience, I needed to ask around my Lebanese and trendy friends who knew where to buy this stuff. Social communication AGAIN. Now I could have done this on Facebook, but it is not instant, it really is not like actually asking someone face to face.

. . . in Australia and I must say in Asia as well, there are bricks and mortar shops to go to. Unfortunately, my experience is that in Australia they are not, on the whole, staffed with eager and knowledgeable assistants . . .

Contrast that experience with recipe bloggers like Jamie who has been very savvy and gotten into the swing of things by producing not the menu, but the entire meal, fresh ready to cook, without the pain. I am not talking TV dinners, but nice fresh stuff with maybe a sauce or so that Jamie has lovingly branded. And as an added bonus, for the cost of following some very simple instructions we get results that allow us to pretend we are Masterchefs! And here’s the kicker,

big advantage here, being assured it will work takes away a lot of the stress of cooking. If you can deliver something to the table that everyone is happy with, life is just that bit easier.

Now this “almost half made food” revolution is not just happening with foodstuffs and meals, it’s happening even with raw materials in our cosmetic world. We get blends and packaged up miracles, that can make formulating either fantastic and simple (“gee that worked well”) OR dead boring (“how dare they tell me how”). The experience (as a formulator) depends on whether you are a beginner who appreciates all the help they can get or someone at the other extreme (the likes of a Heston Blumenthal) turning the mundane into a near magical experience.

What about cosmetic/skincare/ personal care consumers in the social and digital world? What is their experience of their cosmetic or personal care purchase?

I think Colour cosmetic brands twigged very early that they were not part of just skin care et al. They were FASHION and thus played the game of new stuff all the time and some magic gimmicks here and there. And I am still baffled that frock shops and makeup are not in the same store. Both are totally linked in my small and humble opinion. If I could get made up at the same time as made over, well here is my credit card!

A few companies have done something newish in skincare, like the brand that makes ones face instantly smooth and not a wrinkle to be seen (you know who I mean). But then they are not really digital or personal or social except for the massive amount of BUZZ that is created through advertising and television and maybe demonstrations. With this type of product or line there has to be a gimmick that shows up instantly in a demonstration and works well on TV. Then it goes viral and Wham, the sales go through the roof. If it happens to be a really good product that does in fact work, then the chances are

repeat purchases will ensue and the product will last quite a while in the marketplace. These days I take that to mean at least longer than six months!

Also there is also the way stuff is sold. Here in Australia and I must say in Asia as well, there are bricks and mortar shops to go to. Unfortunately, my experience is that in Australia they are not, on the whole, staffed with eager and knowledgeable assistants, which drives this shopper crazy. I know I can walk into a department store and pretty much it is a dead zone. Even the counters that are populated do not appear to have welcoming assistants, rather I find them intimidating, and not exciting. Anyway the department store is dead if something does not change...or is it already? Debate.

The second speaker also talked about delivery. Retailers have all this real estate that they have to get us into on a regular basis. For many items one must try before one buys. Awful for retailers who go to the huge expense of a store that is then used by consumers just to test products, then go on line for the best

price, too cruel, but some retailers fight back with some simple methods to get people IN STORE to BUY.

For instance, CottonOn is a clothes retailer that has a six week fashion cycle. You need to go to the store to see what's available. See something and don't buy it then and there and it has gone forever.

a consumer now has easy access to information to assist in making the best possible purchasing decisions. And have the means to share their opinions by publishing feedback about shopping and purchasing experiences

Then there are the seemingly millions of loyalty clubs, but they have to be good. And most aren't. The points have to be worth the trip to the store. If not, their plastic loyalty cards are just more junk to carry around.

Notwithstanding my general assessment of the state of retailing in

this country, there are great stores that do have brilliant staff who really know their stuff. Many of the independent Australian cosmetic stores are like this, in that they are exciting to enter, have a point of difference and offer some fun retail therapy. For the most part these types of stores are not discounters, and they never will have the brands that are happy to go half price ten times a year in a warehouse environment. But what they do have is variety, and they have contact and social cachet. And the assistants are more like advisors and we can enter and there is always something different. We do not have to be loyal to a brand as such, but loyal to the store brand that looks after you. They become the 21stC version of my mum's butcher advisor.

When young people use the Internet they cannot even conceive of what it really is, they think it is all real and take all information pretty evenly. The highest hits overall are Dr Google diagnosing every ailment known to mankind, (I get sick just by reading the symptoms) and on YouTube the silly cat videos trump all others. So I have decided to reinvent myself as Dr Kitty, and become a needed skin renewal creator and advisor. Personally I quite like both, so here's Dr Kitty ready to dispense her advice:

It is a lot easier to market digitally or conventionally with special groups like mothers or babies where a blog or a club can be made with helpful hints hitting ones smarty pants phone regularly, and maybe this is possible with hair, or other life needs? Hey if it can plug into another special needs group like allergic skins then maybe there is an opening for the good Doctor.

One thing is clear, the days of just getting one's product on a shelf to ensure success is well and truly over. Brand owners can't expect that a passer-by will love it on sight and buy it forever more. The new reality is that unless there is an app or some other digital thingy going on that makes it fun, convenient or loves you or reminds you to use it, your product is likely to occupy shelf space for



Figure 1 The Doctor Kitty is ready to rock

only a short time.

The internet and web pages or shops are just another shelf by the way. It is all about the way that shelf is used and how it relates to people that is the point.

You have to go to your customer, not them to you. By and large, the some of the big Aussie retailers and Brands make me despair with their marketing media... almost all hard copy type. Horrid, expensive, often poorly targeted and not at all personal either. Just recycle fodder and it makes all the products associated with the advertising so much more expensive. And suppliers really hate it, they all want NEW stuff. We are different to the days back when but we are the same in our feelings and needs.

notwithstanding my general assessment of the state of retailing in this country, there are great stores that do have brilliant staff who really know their stuff.

Nowadays, it seems to me that the mantra is that NEW and SOCIAL CONTACT lives and CONVENTIONAL, lazy and impersonal DIES...debate this and choose.

And if you're keeping count, you'll have noticed that I've referred to only two speakers in my musing so far. Perhaps you're wondering what the third speaker talked about, and whether they said anything of interest since I haven't mentioned them at all? Well here goes:

The third speaker brought things to a close by reminding us that shopping in the digital era can be a rewarding experience for consumer, retailer and brand owner alike.

A consumer now has easy access to information to assist in making the best possible purchasing decisions. And (potential double edged sword here) have the means to share their opinions by publishing feedback (both good and bad) to the marketplace about shopping and purchasing experiences. Interestingly the speaker and the

business pages in the newspapers have reported that women owned startups are the ones most successful social bloggers and utilisers. Maybe women are still the same as my mum's time and like the social contact. (Just like Dr Kitty.)

Retailers and brand owners increasingly have a raft of digital tools that, used carefully and with skill, can provide the customer with a more dynamic, personalised, and rewarding shopping experience. Used correctly, and in conjunction with other strategies, these tools can mean the difference between being nimble on ones feet and being caught flat footed.

Finally, and this really should come as no surprise, the third speaker told us an essential home truth: an online presence and associated digital tools aren't the product, just the means to bring the product to the attention of prospective consumers. At the end of it all, you still

need to have a product that fulfils the needs/desires/ wants of the consumer, so make sure your product embodies those qualities before you start your journey

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Patenting natural and organic cosmetics – can it be done?

by Carol Burnton

Two interesting trends are occurring in the international cosmetics market which, at first glance, seem to be in conflict. The first trend is the expansion of the natural and organic cosmetic products market. The second is an increase in patent activity in the cosmetics sector.

Irrespective of your position in the natural vs synthetic cosmetics debate, it is clear to everyone that natural and organic cosmetic products are big business and have an expanding customer base.

While this market shift towards natural products is occurring, businesses in several key technology sectors are increasingly recognising the value of their intellectual property, becoming more patent savvy and actively managing and valuing an intellectual property portfolio. This increase in patent activity is occurring in the cosmetics sector. In 2009, the cosmetics industry accounted for 10% of all patents granted in the European Union.¹ The Geneva based Union for Ethical BioTrade review of patent activity in the cosmetics sector analysed the increase in cosmetic patenting worldwide.² The data in that report showed the Australia Patent Office ranked 11th based on the number

of published patent applications for ingredients or extracts for cosmetics or perfumes, with numbers behind countries such as the United States, Japan, Europe, France, Germany, the United Kingdom, Italy, Korea and Switzerland. The report also showed that while cosmetic patenting is not yet as big an industry as medical or biotechnology patenting, there is greater patent activity in the cosmetics sector than in either plant agriculture or herbal medicines and only slightly fewer cosmetic patents than patents in food technology.

These trends leave us with a movement towards natural cosmetic products and a movement towards better intellectual property protection. This raises a question: “Can you patent something that is natural?”

Can you patent something that is natural?

Most people are intuitively aware that

something naturally occurring and in its natural state is not an invention and should not be patentable. In accordance with this common sense, the law will not allow a patent for something natural in its natural state. This takes us to a second question: If a natural ingredient itself cannot be protected, how do businesses protect their breakthrough natural or organic products? Clearly, it would be unfair for a new synthetic product to be protected by intellectual property, when an equally valuable and scientifically impressive development in natural cosmetics was not protected by the law. The solution is in the type of patent sought. The two most common ways to gain the desired protection for a natural or organic product are:

- to patent the use of the natural or organic cosmetic; and
- to patent the formulation of the natural or organic cosmetic.

Protecting the use of your natural or organic cosmetic

The effective use of this strategy can be illustrated by an example. In 1998 L’Oreal filed a patent to protect an extract of the genus chrysanthemum (Australian patent number 739954). The extract was found to be useful in improving pigmentation ie as a tanning agent. The chrysanthemum plant was not patented because it is naturally occurring and not an invention. Had L’Oreal made an invention? The Patent Office determined there had been an invention and granted a patent to L’Oreal. So what was the invention? L’Oreal had discovered that their plant extract had an activatory effect on melanogenesis. Use of the L’Oreal extract to assist pigmentation of the skin or hair appeared new and inventive based on the information before the Patent Office so L’Oreal was granted a patent for use of their extract to increase pigmentation of skin or hair.

This ‘use’ patent is different to a patent for the extract itself but still covered every commercially important cosmetic application of L’Oreal’s invention.

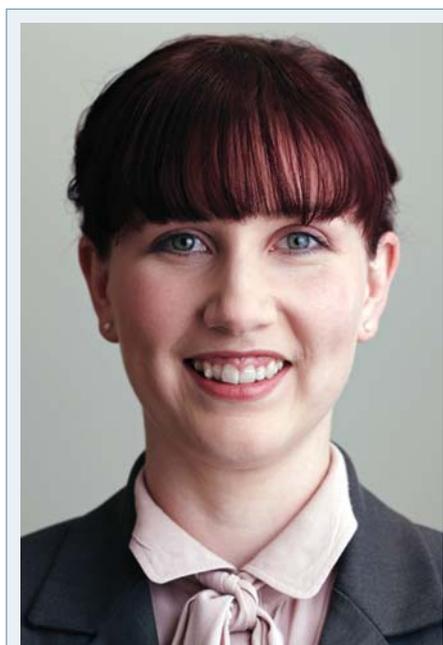
Protecting the formulation of your natural or organic cosmetic by patenting

Formulation patents are valuable in the natural and organic cosmetics industry. A formulation as a whole is not naturally occurring so it can be an invention. The formulation patent could be for a natural extract in a synthetic formulation or for an entirely natural or organic formulation. The invention to be protected could be the idea of formulating your new natural ingredient or extract into a cosmetic formulation or it could be about making the formulation more stable or more effective than previous formulations.

Preparing a formulation patent has additional challenges. Narrow formulation patents for the exact formulation of the cosmetic are often easy to design around and not very valuable to the patent holder. If you are considering a formulation patent, make sure you work with your patent attorney to ensure you have the data to support a broad or strategic formulation patent that cannot be avoided by a simple tweak to the formulation and therefore effectively protects you. That said, a properly prepared formulation patent can provide very comprehensive protection for your valuable natural or organic cosmetic.

Are people really filing patents for natural ingredients in cosmetics?

The data collected by the Union for Ethical BioTrade showed that patents for natural ingredients or extracts accounted for 49% of cosmetic patents filed between 1990 and 2009. This data accords with my personal experience in pursuing patents for products that are sold as certified organic and patents for the cosmetic use of many extracts from beans, seeds or plants. Not only are cosmetic patent filers patenting their natural ingredients but these patents are proving so valuable that they are the largest category of patents in the sector.



CAROL BURNTON
Senior Associate, Freehills Patent Attorneys

Carol is a registered patent attorney with specialised skills in patents for cosmetics, cosmeceuticals and pharmaceuticals. Carol takes pride in her practical approach to assisting clients protect their inventions, understand the intellectual property of their competitors and minimise risk for maximum return.

What should I remember?

When developing a new natural or organic cosmetic, remember that:

- you may be entitled to patent protection;
- the cosmetics industry considers patents for natural ingredients and extracts to be valuable; and
- patenting for natural or organic cosmetics can be tricky so it is best to use a patent attorney with significant experience in cosmetic patenting.

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