

## RESEARCH TRENDS

# COCONUT OIL REDISCOVERED

## - An insight into its amazing properties

S.M. Shanbag

The 'Kalpavriksha', in ancient Hindu mythology, is the 'wish fulfilment' tree, which held the power to grant man's every wish. Some parts of India, especially coastal areas still call the Coconut tree as Kalpavriksha or kalpataru because of its ability to amply provide for human needs.

The Coconut is an intrinsic part of our religion, culture, food and medicine.

How the image of coconut oil was tarnished?

In the early 1980's, a massive campaign against coconut oil was launched by the American Soybean Association (ASA). Scientific publications showing PUFA (poly unsaturated fats) role in reducing cholesterol and Atherosclerosis was used as a counter against saturated oriental oils like palm and coconut. Intense lobbying by soybean farmers with vested interests led to labelling of coconut oil as 'artery clogging fat'.

Food industry in USA cashed in on anti coconut sentiments and started switching from coconut to soybean oil or partially hydrogenated soybean oil, labeling it as 'containing no oriental oils'.

In next decade, scientific study showed that too much of PUFA is actually bad. For a healthy diet we need certain ratio of two different PUFA fractions Omega 3 and Omega 6 combined with sizable portion of mono unsaturated fats. Medium chain fatty acids (MCFAs) found in palm and coconut are beneficial.

By this time American population was subjected to double damage. By withdrawal of essential beneficial coconut oil and replacement with partially hydrogenated soybean oil which brought in potentially harmful Trans fats. This led to massive increase in Obesity and diabetes cancer etc.

But the image of coconut oil still remains tarnished. Who will tell public or professionals who have been brainwashed over such long period of time that coconut oil is bad?

Today coconut oil has returned to American kitchen as new independent research has established that coconut oil is much healthier. Because the medium chain fatty acids is energy producer and seldom ends up as body fat and



does not become rancid on heating.

What is so good about Coconut oil?

In my last article of "Microbiome" I had impressed that we are part of ecosystem of 100 trillion microbes. Our health depends on some kind of equilibrium with this gigantic word of bacteria. Over a period last three decades man has developed potent weapons

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## RESEARCH TRENDS

in killing bacteria called antibiotics. What has happened over period of time is that literally every antibiotic has become ineffective due to resistance developed by the microbes.

There is exponential increase in viral diseases like simple cold influenza, AID Herpes, SARS, H1N1. Antivira drugs have been developed but they are not for killing the virus.but containing them (static).

Over a period of time the microbes (bacteria and virus) have started becoming super bugs untreatable by any medication. Antibiotics and anti viral drugs available now leave lot of damage and injury to body organs.

Coconut oil which has unique fatty acid composition. Medium chain fatty acid Lauric capric and caprylic in glyceride form gives the anti microbial antiviral anti fungal anti protozoal property.

When you eat coconut oil it gets converted into mono glycerides. These monoglycerides like glyceryl monolaurate is responsible for anti microbial effect.

Most bacteria and viruses are coated with a unique lipid layer. MCFA medium chain fatty acids in the form of monoglycerides get attached to this lipid coating and disrupt their mobility and get killed. The MCFA kills the organism without harming the human body tissues.

In our microbiome MCFA has a distinct function. It is present in our gut right from our birth along with such huge population of microbes.

In essence coconut oil derived products inside the body immune modulators and also acts as energy source. As the new born baby comes out of mother's womb mother's milk is prime source of immunity against host of bacterias it comes in contact. Mother's milk as well as milk from other mammals contains the MCFA. This MCFA is first anti bacterial immunity provider

Glyceryl mono laurate or Monolaurin is sold as dietary supplement. Many health care clinics have used monolaurin in conjunction with other medication to treat HIV infection with good results.

Monolaurin is made from coconut oil. It has been reported that coconut oil equally good benefits as that of Monomlaurin. Use of coconut oil in cold and flu infection has been shown



effective results.

In laboratory tests it has been shown that MCFA in coconut oil is effective in destroying viruses that cause influenza, herpes, hepatitis C, AIDS, and bacterial infections that cause stomach ulcers. Pneumonia, Sinusitis, earache, throat infection, dental caries, urinary infection, fungal infection like eczema, Candida Parasitic infection like Giardiasis

Coconut oil and cosmetic usage

Skin barrier properties are well known to all cosmetic scientists. Sebum secreted from skin contains MCFA and this is acting as buffer along with sweat secretions and produces a barrier layer called Acid Mantle. It prevents bacteria from entering within the system. Origin of these MCFA is from food intake of various nut based fats.

Coconut oil skin and scalp application is most essential as it will boost the functionality of this acid mantle. It will also help to kill bacteria which causes dandruff and the parasites like lice etc

For dry skin conditions the barrier property of skin is compromised and coconut oil will provide biologically similar lipid barrier for quick recovery.

Pre application coconut oil before hair wash is common among Indian ladies. This will retard the harsh action of surfactants and reduce stripping of protein from hair and also leave behind beneficial layer of coconut oil on hair.

Glyceryl mono laurate made from coconut oil is a good nature friendly emulsifier. Instead of widely used GMS Glyceryl monostearate if we use GML it will be far more beneficial for skin

care creams and lotions

Chapped lips are serious lip barrier problem. Petrolatum is effective chapstick but use of coconut oil in conjunction with petrolatum will add synergistic property.

Calamine lotion is recommended for eczema and allergic skin application. Coconut oil with calamine or GML with calamine should do wonders.

Super fatted soaps contain small quantity of coconut fatty acids. This counteracts the dryness produced by alkalinity and provides emolliency on skin.

Conclusion

Coconut oil is one of Gods health food and if consumed as regular diet can protect you from host of infections and illness.



Use of coconut oil for skin are and hair care has been practised from thousands of years. Ayurveda

has many references of use of coconut oil for treatment of various skin conditions.

I was going through an article in Economic times which read –US scientist discover what we already knew: Yogurt is good for body and mind. UCLA scientists deducing that “good” Bacteria in the stomach impacts the brain - by studying the effect of yogurt on test groups - comes as no surprise.

Similarly are we rediscovering benefits of coconut oil based on western scientific data? Let us not fritter away our old traditional wisdom.

## ISCC WORKSHOPS

## THE PERFUMERY WORKSHOP SYNOPSIS

- CONDUCTED ON 25.04.13 by Monisha Mullick



The workshop gave a kaleidoscopic journey of perfumes . The origin and definition of perfume was described . The composition of fragrances and the ingredients whether natural or synthetic and the separation techniques to produce perfumery ingredients was highlighted .

Perfume is described as having three sets of notes to make a harmonious accord. The notes unfold over time, with the immediate impression of the top note leading to the deeper middle notes, and the base notes gradually appearing at the final stage. All perfumes are created carefully with knowledge of the evaporation process of the individual ingredients. Perfumes are usually represented as pyramids.

Each fragrance ingredient belongs to a specific family and has a unique facet. Fragrances, too also fall into one or other fragrance family. The families comprised of Citrus, Ozonic, Green, Fruity, Floral, Aromatic, Spice, Balsamic, Woody, Sandal, Animalic, Aldehydic, Gourmand, Musk, Amber, Fougere & Chypre. The ingredients and fine fragrances belonging to these families were shown on smelling strips. Also it was discussed whether the particular

fragrance was more top note driven or stronger on the base.

In the challenging global consumer market, product designers must keep up with the ever changing dreams and demands of their target customers to stay at the forefront of their industries. Consumer products today must be both functional and desirable. Fragrance gives the soul to your product creating its unique scent to trigger consumers emotions and memories. Equipped with the state-of-the-art equipments and a comprehensive library of essential oils and aroma chemicals, the perfumers and fragrance designers are committed to create fragrances that are distinctive and inspirational.

Designing fragrance is both an art and science. From the science of selecting and extracting the best ingredients, the fragrance designers are trained to create artistic aroma formulae to attract customers. There are endless possibilities of creating fragrances to suit any applications. In general, fragrance applications are categorized into Fine Fragrance or Perfume, Home Care products and Personal Care products.

Odour is very subjective; creating perfume

is an art. Odours fall into three categories: top (head) notes, middle (heart) notes, and base (end bottom) notes. Top notes are perceived immediately but evaporate quickly. Middles notes last for several hours. Base notes may last for days. A well constructed perfume will have notes that blend into one another. This can be accomplished by using components with similar chemical structure. Persistence, the length of time which an ingredient will remain detectable, depends on the ingredient's volatility. Materials chosen for use in a fragrance may vary based on the application of the final product. Conditions that the fragrance may be exposed to manufacture, distribution and storage need to be considered when creating a fragrance.

Each and every raw material and the final perfume has to go through strict quality control. To keep the check over the quality various tests are conducted like Gas Chromatography, Refractive index, Specific Gravity, Olfactory test, Flash Point etc.

Perfume does deteriorate, and the time period depends on the temperature, light and length of storage. Extreme heat and direct sunlight can break down the components of most fragrances . Fragrances should be kept in a cool dry area. Perfume should be stored at room temperature out of direct sunlight and away from extreme heat sources. On average, the shelf life for a fragrance is 3 to 5 years.

Creating the right fragrance takes more than science; it also takes the flair, creativity and instinct of the perfumers.





ISCC WORKSHOPS

# SENSORY ANALYSIS: The Essentials

CONDUCTED ON 24.08.13

Sunil Bambarkar



Half day sensorial workshop was held at Khalsa College, Matunga on 24th May 2013 conducted by Gattefosse India Pvt. Ltd for ISCC

As an introduction, Gattefosse presented the scientific discipline named sensory analysis. Definitions and methods to do it was explained, in order to give the same basis to all the attendance.

Some details on how to setup an expert panel and how Gattefosse has built his own panel was also shown.

Practical tests were done during this part to better understand criteria and tests and the session ended with games around textures.

Using sensorial analysis for texture selection

Sensory analysis could be used to reach different objectives. Concrete examples of applications was detailed, showing how the results of a sensorial study could be used, what it's possible to say and to not say.

A specific point was done on PCA, principal component analysis. This mathematical algorithm can be used to simplify the analysis of data. Applied to sensorial analysis data, it allows the identification of similarities and

differences between cosmetic formulations. By mapping the sensory properties of a wide variety of formulations, it becomes easier to understand trends and to identify differences amongst textures for a given application.

Creation of a texture library

Finally, sensory analysis is an exciting tool to build a texture library, containing in house and/or marketed formulas. In R&D this library is very helpful, particularly for the formulator, to easily match a specific texture or to differentiate from another one.

Around 36 people registered for the paid workshop.

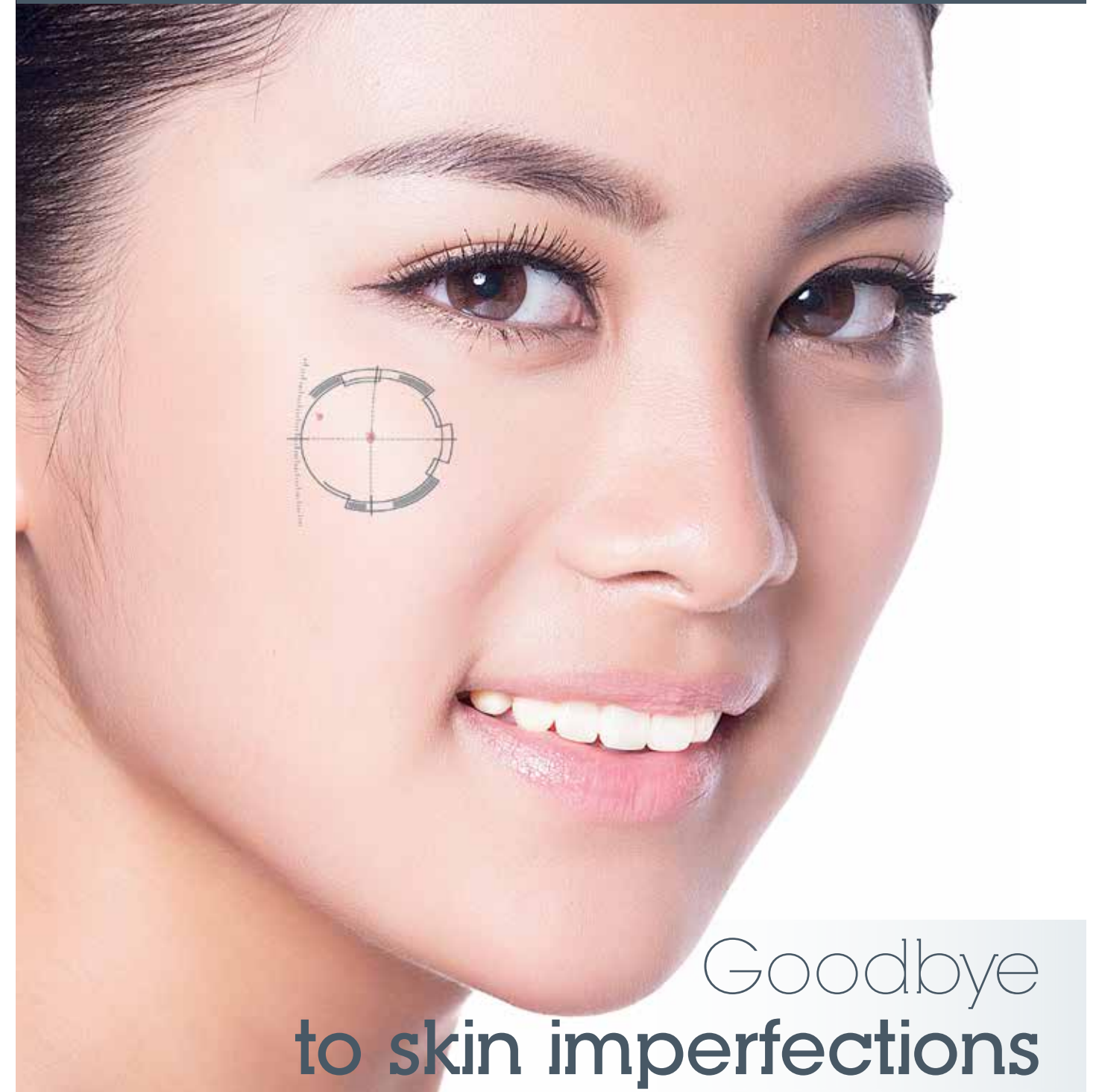
The workshop consisted of:

1. Presentation by Lea COUILLAUD on Sensorial analysis
2. Workshop on sensorial analysis wherein the participants got a chance to evaluate various parameters of sensoriality by themselves
3. Games to detect the sensorial profile of given samples
4. Presentation by Lea on Climate study (effect of climate on sensoriality in various parts of the world)

The presentation made by Ms. Lea was very well appreciated by the delegates.



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ISCC PAST EVENTS

ISCC Nagpur - Current Trends in Cosmetics  
23rd August 2013  
(Pictures 1 & 2)



ISCC Workshop - Herbal Cosmetics  
22nd August 2013  
(Picture 4)

ISCC Workshop - Sensory Evaluation  
24th August 2013  
(Picture 3)



ISCC UPCOMING EVENTS

ISCC - Events Calendar 2014

ISCC - OTAI Conference - Indian Cosmetic Regulations	Courtyard Marriott - Andheri 7th March 2014
PICASSA III - National Competition	Vaze College Dates to be decided
ISCC Workshop - Hair Science*	July 2014
ISCC Workshop - Skin Science*	September 2014
ISCC - AGM	September 2014
ISCC Workshop - Alternate Evaluation Techniques - Safety & Efficacy*	December 2014
ISCC Workshop - Hair Sensory Evaluation*	Venue & Date to be finalised

\* - Participation in ISCC Workshops is free for ISCC members. Charges for non-members vary according to the workshop. Additional Workshops and Conferences will be communicated through ISCC Announcers as and when finalised.

EVENT CALENDAR 2014

COSMETIC AND BEAUTY INDUSTRY EVENTS 2014



**INTERNATIONAL SALON AND SPA EXPO** - LONG BEACH CONVENTION AND ENTERTAINMENT CENTER - JANUARY 25 - 27, 2014

**AEROSOL AND DISPENSING FORUM 2014** - ESPACE CHAMPERRET, PARIS, FRANCE - FEBRUARY 5 - 6, 2014

**HOME AND PERSONAL CARE INGREDIENTS EXHIBITION & CONFERENCE INDIA** - BOMBAY EXHIBITION CENTRE, INDIA - FEBRUARY 5 - 6, 2014

**10TH EDITION OF PACKAGING OF PERFUME COSMETICS AND DESIGN (PCD)** - ESPACE CHAMPERRET, PARIS - FEBRUARY 5 - 6, 2014

**FIT'S COSMETICS AND FRAGRANCE MARKETING PROGRAM 25TH ANNIVERSARY CELEBRATION** - THE NEW YORK YACHT CLUB, USA - FEBRUARY 11, 2014

**THE PERSONAL CARE AND HOMECARE INGREDIENTS (PCHI)** - SHANGHAI NEW INTERNATIONAL EXPO CENTER, SHANGHAI, CHINA - FEBRUARY 19-21, 2014

**PERSONAL CARE PRODUCTS COUNCIL 2014 ANNUAL MEETING** - THE BREAKERS, PALM BEACH, FLORIDA, UNITED STATES - FEBRUARY 24 - 26, 2014

**THE MAKEUP SHOW LA** - CALIFORNIA MARKET CENTER - MARCH 1 - 2, 2014

**COSMETICS VISION 2014** - GRAND HYATT CANNES MARTINEZ, FRANCE - MARCH 5-7, 2014

**INTERNATIONAL ESTHETICS, COSMETICS AND SPA CONFERENCE** - JACOB K JAVITS, CONVENTION CENTER, NEW YORK, USA - MARCH 9 - 11, 2014

**INTERNATIONAL BEAUTY SHOW** - JACOB K JAVITS, CONVENTION CENTER, NEW YORK, USA - MARCH 9 - 11, 2014

**AMERICA'S BEAUTY SHOW- AMERICA'S EXPO FOR SKIN CARE & SPA** - MCCORMICK PLACE - MARCH 22 - 24, 2014

**CLEANING PRODUCTS EUROPE** - HILTON DEANSGATE, MANCHESTER, UK - MARCH 25 - 27, 2014



**IN-COSMETICS** - HAMBURG, GERMANY - APRIL 1 - 3, 2014

**COSMOPROF WORLDWIDE** - BOLOGNA, ITALY - APRIL 11 - 14, 2014

**105TH AOCs ANNUAL MEETING & EXPO** - SAN ANTONIO, TEXAS - MAY 4 - 7, 2014

**THE MAKEUP SHOW NYC** - METROPOLITAN PAVILION, NEW YORK, UNITED STATES - MAY 4 - 5, 2014

**NYSCC SUPPLIERS' DAY** - NEW JERSEY CONVENTION CENTER, EDISON, NEW JERSEY, UNITED STATES - MAY 13 - 14, 2014

**LUXE PACK NEW YORK** - PIER 92, NEW YORK - MAY 14 - 15, 2014

**PREMIERE ORLANDO BEAUTY SHOW EXHIBITION** - ORANGE COUNTY CONVENTION CENTER - JUNE 1 - 2, 2014

**THE MAKEUP SHOW CHICAGO** - BRIDGEPORT ART CENTER, CHICAGO, ILLINOIS - JUNE 7 - 8, 2014

**WORLD PERFUMERY CONGRESS** - DEAUVILLE, FRANCE - JUNE 10 - 12, 2014

**HBA - GLOBAL EXPO** - JACOB K JAVITS, CONVENTION CENTER, NEW YORK, USA - JUNE 10 - 12, 2014

**INTERNATIONAL BEAUTY SHOW** - LAS VEGAS CONVENTION CENTER, USA - JUNE 21 - 23, 2014

**HAPPI ANTI-AGING CONFERENCE & TABLETOP EXHIBITION** - HYATT REGENCY, NJ, USA - SEPTEMBER 16 - 17, 2014

**THE MAKEUP SHOW DALLAS** - HYATT REGENCY, DALLAS - SEPTEMBER 27 - 28, 2014

**INNOCOS BEAUTY 2.0 SUMMIT & AWARDS** - NEW YORK, USA - OCTOBER 23, 2014

**28TH IFSCC CONGRESS** - PARIS, FRANCE - OCTOBER 27 - 30, 2014

**THE MAKEUP SHOW ORLANDO** - SHANGHAI MART, CHINA - NOVEMBER 15 - 16, 2014

**HPC EXHIBITION AND CONFERENCE** - SHANGHAI MART, CHINA - NOVEMBER 19 - 21, 2014



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