

COSMEGRAM

california

November 2014

Volume 44 | Issue 8

Dinner Hour

Colors in Cosmetics - Is it a Dye or a Pigment or a Lake or a Toner? And Can I Use It?



David Steinberg, FRAPS
President
Steinberg & Associates, Inc.

This will cover the basic definitions which cause many regulatory problems and a review of how this impacts many colors, especially Japan.

The basic regulations of the US, EU and Japan for the use of each color.

Finally, the complex issues related to the labeling colors.

About Our Speaker

David received his BS in Chemistry from Drexel University and his MBA in Management from

...continued on page 3

Educational Hour

The State of Oral Care; Where It's Been and Where It's Going



Dr. Maddahi
Owner and Co-Creator
Oral Essentials

Dr. Maddahi is the best-selling author of Anti-Aging Dentistry, Restoring Youth One Smile at a Time, an overview of the subfield in dentistry he pioneered which focuses on aging in the lower third of the face and providing patients with alternatives to more invasive procedures.

He is also the owner and co-creator of Oral Essentials, a new line of oral care products, which offers consumers a more natural solution to freshening their breath and maintaining healthy gums and teeth.

About Our Speaker

Dr. Maddahi has built a reputation as one of the most trusted names in cosmetic and restorative

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Meeting Details:

Date: **Tuesday - November 18, 2014**

Location: **Manhattan Beach Marriott**

Menu: **Chicken Breast, White Fish or Vegetarian**

Educational Hour - 5:00 p.m.
Dinner Hour - 6:30 p.m.

Social Hour - 6:00 p.m.
Dinner Speaker - 6:30 p.m.

More Meeting Details on Page 2

Reserve Today!

Pay online at www.caliscc.org
or

Call (661) 388-6373 to reserve

Reservation Deadline: 12:00 p.m. (noon) Friday-Nov. 14

If you reserve and do not attend, you are responsible for meeting charges.
You will be billed accordingly.

Free Meeting for Members with Reservations

Meeting reservations are strongly encouraged!

Inside this issue.

Calendar...2 Message from the Chair...5 Feature Article...6 Job Opportunities...11 Historian Column...20

Meeting Details

Location

Manhattan Beach Marriott
1400 Parkview Ave.
Manhattan Beach, CA 90266
(310) 546-7511

Costs

- FREE Members with reservations and first-time only guests with a member-sponsored reservation. *Non-member pricing in effect after first meeting.*
- \$65.00 Members without reservations
- \$55.00 Non-members with reservations
- \$70.00 Non-members without reservations

Menu

Mustard Crusted Chicken Breast, Compressed Parmesan-Potato Cake, Market Vegetables, and Carmelized Onion Chicken Jus **OR**
Grilled White Fish, Savory Lemon Polenta, Wilted Rocket, Sun Dried Tomato Cream **OR**
Vegetarian Penne Pasta Primavera

Reservations

Please register and pay online at www.caliscc.org; Christina Hernandez: **661-388-6373**
Call-in registrations must be guaranteed with credit card and will be charged for no-show.
Reservations will be accepted no later than 12:00 p.m. the Friday before SCC Meetings.
If you call in after 12:00 p.m., your spot cannot be guaranteed and you will be required to pay the walk-in rate. Limited space – register today! Walk-ins may be turned away.

Never To Be Forgotten...

It is with heavy hearts that we acknowledge the passing of two integral women to our industry:

AIDA THIBIANT



MARY WARD



Aida Thibiant passed away on October 14th, 2014. Aida was the owner of the namesake day spa in Beverly Hills and leaves behind a rich legacy with contract manufacturing facility, Thibiant International.

A true pioneer of the professional skin care industry, Aida will be sorely missed.

Mary Ward passed away on September 13, 2014. Mary and her husband, Dr. Geoffrey R. Ward, founded Custom Research Labs, Inc. in 1964.

Those of us who knew Mary will be forever enriched by lovely memories of a delightfully sweet, kind, and warm lady. She will be sorely missed.

Society of Cosmetic Chemists - California Chapter

2014 Calendar of Events

November

18 California Chapter Monthly Meeting *Manhattan Beach Marriot*

December

11-12 69th Annual Scientific Meeting & Technology Showcase *New York Hilton Hotel & Towers
New York City*

January

27 California Chapter Monthly Meeting *Manhattan Beach Marriot*

Dinner Hour

...continued from page 1

Pace University. He joined the SCC in 1969 and has served amongst many offices as Chairman of the New York Chapter and National Treasurer and President.

In 1985, he was awarded the National Merit Award and in 1987 was evaluated to Fellow status. He is a member of the Regulatory Affairs Professional Society and was elevated to Fellow Status. He is the only member who was named a Fellow who deals with the regulations of Cosmetics and OTC drugs.

He is the author of many books, chapters in books, papers and wrote a regular column for 18 years for Cosmetics & Toiletries Magazine.

He founded Steinberg & Associates, Inc. in 1995 and Report Reaction, LLC in 2008 and currently serves as Presidents of both companies. He founded the Masters program in Cosmetic Sciences at Fairleigh Dickinson University and taught there for 18 years.

Educational Hour

...continued from page 1

dentistry. After graduating with honors from UCLA in 1983, Dr. Maddahi went on to complete his dental degree at the University of Southern California School of Dentistry and, in 1987, opened his dental office in Beverly Hills.

Now, more than 25 years and 8 thousand patients later, Dr. Maddahi remains at the forefront of his field. His unparalleled dedication to education, innovation, and patient comfort and satisfaction have earned him the Consumer Research Council of America's vote as one of America's Top Dentists in the Cosmetic and Implant Dentistry fields, as well as the Best of Beverly Hills award appointed by the United States Commerce Association.

As a means of ensuring his patients continuously receive only the best and most cutting edge options and procedures, Dr. Maddahi believes in exceeding the annually required ongoing education and training for dentists - a belief that often affords him three times the experience of most other dentists in his field.

His extensive honors and certifications have included Advanced Implant Training, Restoring Oral Bioesthetic Form and Function, and Advanced Cosmetic Dentistry Training. In addition, Dr. Maddahi has also provided education for his peers, lecturing on Natural Esthetics with Implant

Prostheses at the Institute of Bioesthetic Implant Dentistry in Los Angeles.

His groundbreaking work has been featured on top television programs, such as Extreme Makeover, Oprah, 10 Years Younger, ABC News, CBS News, and he has frequently been consulted for his expertise on various network news programs, such as KABC News, KTLA Morning News, and FOX's Good Day L.A.

Backed by a sterling staff, a state of the art dental facility, and an unparalleled ability to imagine anew and recreate a patient's smile, Dr. Kourosh Maddahi is not only a pioneer in his dental fields, but also a true visionary.

Dr. Maddahi is a member of the following organizations:

- American Academy of Cosmetic Dentistry
- American Academy of Implant Dentistry
- Academy of Osseointegration,
- American Dental Association
- California Dental Association
- Los Angeles Dental Society
- Academy of General Dentistry



In October 2016, the Society of Cosmetic Chemists will host the 29th Congress of the International Federation of Societies of Cosmetic Chemists.

This prestigious event will be held October 23-26, 2016 at the Walt Disney World Resort's Dolphin Hotel in Lake Buena Vista, Florida.

Cosmetic Scientists presently representing the 47 Member Societies comprising the IFSCC will gather to discuss and advance the science and technology of our industry.

The theme for the Congress is "Beyond Dreams into New Frontiers: Inspire, Imagine, Innovate". The 29th IFSCC Congress will provide the US industry an opportunity to exchange scientific knowledge on a global basis.

For more information, please visit www.sconline.org



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Waxes, Synthetic Bees Wax,
Carnauba Wax, and Candelilla
Wax, USP Petrolatums, Paraffin
Waxes, ISO Polymers

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The Specialty Chemical Specialists

Thank You!

Karen Chun
Barnet Products

It's hard to believe but this is my last Chair Message and my last monthly meeting as Chair. Where has the time gone?! It truly has been my pleasure and honor to serve you as your Chair this year. When I became Chair for the first time twelve years ago in 2002, I had a great team that worked tirelessly to make the second largest SCC chapter a success. The second time around was no different. Only with an amazing Board of elected officers and committee chairs were we able to accomplish all that we did this year. I would like to thank all of our Board members for giving of their personal time and effort to organize meetings and events in order to give our members a chapter to be proud of. But most importantly, thank you to our members for your commitment and support. Our membership continues to grow every month with the highest membership we've ever had at 660 members.

There are many things that set apart the California Chapter so I wanted to list a few for you to always remember us by and be proud of. We are the second largest chapter of 19 National chapters. We have a brand new re-designed website that is user friendly and eye catching. We organize a globally attended Suppliers' Day with over 1,500 attendees. Our monthly meetings consist of not just one but two speakers. That's 16 technical presentations a year, excluding other meetings like scientific seminars. Members only pay \$20 for monthly meetings (per person meal on average is \$60 otherwise) plus a FREE meeting in November. Dinner Dance is attended by more than 900 people. We participate at a local elementary school Science Fair. And our weather is 68°C during the winter! It's lovely being in California!

I know there is still so much to be done but I am confident that I leave you in the very capable hands of Angie Inouye as your new Chair for next year. Along with her team of newly elected officers and committee chairs, we are guaranteed another great year. Join us at our last monthly meeting of the year on November 18th as we install our new officers. Our very own Debbie Pierce, Vice-President of National SCC, will be conducting the installation.

I am looking forward to seeing you at future events. Come say hi to me! I will now have time to talk! :)

Warm Regards,

Karen Chun
2014 Chair, California Chapter
Society of Cosmetic Chemists



**"Knowing is not enough, we must apply."
"Willing is not enough, we must do."**

Bruce Lee

The Greening of Emulsions

Joseph Albanese

Lets Start with a Joke

Vegetarian: "I'm not a vegetarian because I think eating meat is unhealthy for me. It's because raising cattle is bad for the planet. Cow flatulence adds to the ozone layer and the clearing of land for the raising of cattle means fewer green plants producing oxygen through photosynthesis. What are you doing to help the environment?"

Ron White: "Personally, I'm eating the cows as fast as I can. BUT I'M ONLY ONE MAN!"

Now Let's Get Serious!

As a cosmetic chemist developing a new emulsion is there anything that you can do to help save the environment? Might I suggest that in your daily work you keep in mind the Twelve Principles of Green Chemistry?¹ See Figure 1. For this brief article, let's limit the discussion by focusing on Principle No. 6, which calls us to "Design for Energy Efficiency – Minimize the energy requirements of chemical processes and conduct synthetic methods at ambient temperature and pressure if possible." An early pioneer in this area is Dr. T. Joseph Lin who published his initial work on Low Energy Emulsification (LEE) in 1978,² long before the EPA came out with their Twelve Principles (see Figure 2). Dr. Lin's research taught that stable emulsions could be prepared successfully even if all of the external phase is not at elevated temperature. In the case of an oil-in-water (O/W) emulsion, the LEE procedure calls for only a portion of the external water phase (β phase) to be heated before combining it with the hot internal oil phase. This emulsion concentrate is then diluted to the desired concentration with the remaining ambient temperature water (α phase) to cool down the emulsion. The rate of cooling has a profound effect on particle size of the internal phase and overall acceptability of the final emulsion.

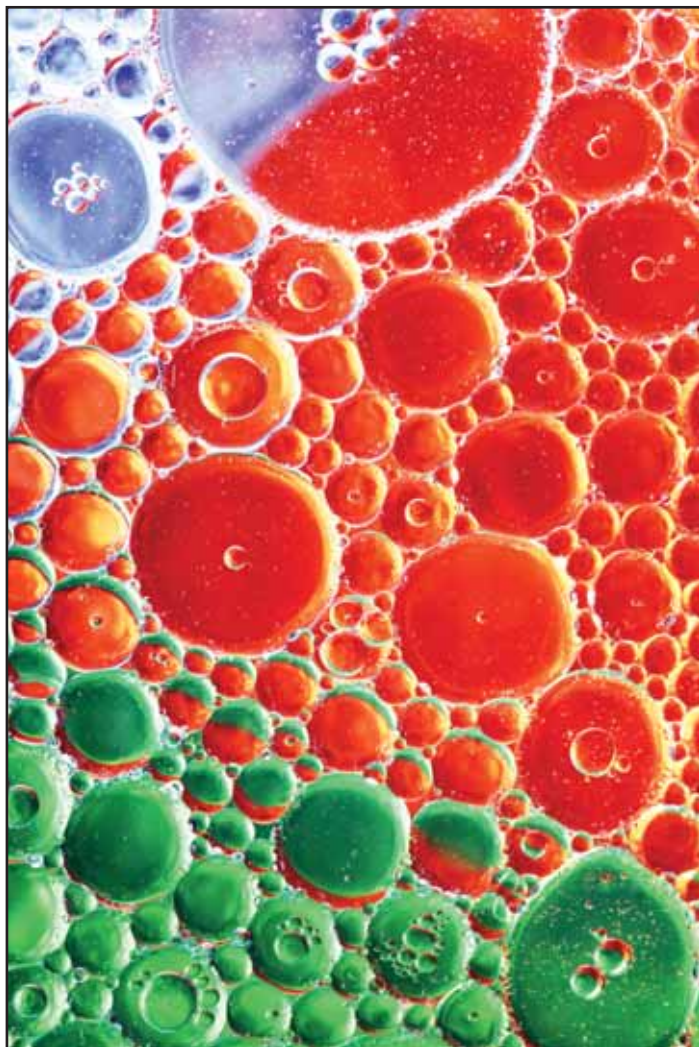
In his more recent publication,³ a delightful and educational treatise, Dr. Lin explains, in story-telling fashion, that by carefully controlling processing variables (pV) and component variables (cV also known as ingredients) LEE optimizes the desired properties (Zp) of your emulsion. In short, LEE requires less energy input to create stable emulsions, thus it saves money, reduces processing time, increases plant capacity, and reduces the carbon footprint of your plant without having to reformulate or invest in new equipment. Dr. Lin also stresses the "less is more" philosophy. Namely, too much of a good thing can be detrimental to achieving your goals.

Later, we will advance this pioneering research of Dr. Lin's to show how you can include specific types of polymers into your formula that will enable you to create emulsions quickly, with little to no surfactant emulsifiers and requiring less energy input, but first, let's take a step back in time.

The History of Emulsions

Reportedly, Galen developed the first emulsion in ancient Greece back in 131–201 AD and the Egyptians combined beeswax and borax to make emulsions. Why does this early love affair with emulsions continue to this day? Simply because emulsions are an elegant and cost effective way to easily and elegantly deliver a wide range of active ingredients because water is less expensive than cosmetic oils. Emulsions are also a wonderful vehicle to deliver oil soluble actives with a non-greasy skin feel. Emulsions can dilute pharmaceutical and OTC actives down to safe, yet still effective, levels.

An emulsion is a mixture of two or more immiscible liquids. When oil is the internal or dispersed phase it is known as an oil-in-water, or O/W, emulsion. When oil is the external or continuous phase, then it is a water-in-oil,



or W/O, emulsion. Without going into details, there are several techniques for determining the kind of emulsion at hand. They are the dilution test, conductivity test, dye solution test, RI Test, and filter paper test. Multiple phase emulsions are also possible.

Twelve Principles of Green Chemistry

1. **Prevention** – It's better to prevent waste than to treat or clean up waste afterwards.
2. **Atom Economy** – Design synthetic methods to maximize the incorporation of all materials used in the process into the final product.
3. **Less Hazardous Chemical Syntheses** – Design synthetic methods to use and generate substances that minimize toxicity to human health and the environment.
4. **Designing Safer Chemicals** – Design chemical products to affect their desired function while minimizing their toxicity.
5. **Safer Solvents and Auxiliaries** – Minimize the use of auxiliary substances wherever possible make them innocuous when used.
6. **Design for Energy Efficiency** – Minimize the energy requirements of chemical processes and conduct synthetic methods at ambient temperature and pressure if possible.
7. **Use of Renewable Feedstocks** – Use renewable raw material or feedstock whenever practicable.
8. **Reduce Derivatives** – Minimize or avoid unnecessary derivatization if possible, which requires additional reagents and generate waste.
9. **Catalysis** – Catalytic reagents are superior to stoichiometric reagents.
10. **Design for Degradation** – Design chemical products so they break down into innocuous products that do not persist in the environment.
11. **Real-time Analysis for Pollution Prevention** – Develop analytical methodologies needed to allow for real-time, in-process monitoring and control prior to the formation of hazardous substances.
12. **Inherently Safer Chemistry for Accident Prevention** – Choose substances and the form of a substance used in a chemical process to minimize the potential for chemical accidents, including releases, explosions, and fires.

Source: <http://www.epa.gov/science/matters/june2011/principles.htm>

Figure 1

The particle or droplet size of the internal phase is one way of knowing whether or not you have an emulsion or something else. If the particle is very large, then it is more likely a dispersion or suspension. If the particle is very small, then it is likely an emulsion or possibly even a solution. The smaller the particle size the more stable the formula.

The most stable emulsions are microemulsions. In fact, when the dispersed phase is 0.01–0.2 μm in size the emulsion is thermodynamically stable. Microemulsions are characterized by their transparency since the droplet size is <25% of the wavelength of visible light. They normally require very high surfactant levels, which ultimately results in very low O/W interfacial tension. Because of the high surfactant levels they require lower energy input.

The focus of this article will be on the more commonly found macroemulsions. The range of the particles in the dispersed phase is 0.2–50 μm . These formulas are inherently kinetically stable but ultimately unstable due to the Second Law of Thermodynamics. They are opaque in appearance and require relatively high-energy input to create. Figure 3 shows the common ingredients and their approximate use-levels often found in a typical macroemulsion.

Traditional Ways to Make an Emulsion

As a highly educated professional and experienced formulator you know that oil and water do not mix. They exemplify the very definition of immiscible. Significant energy input is required to create a homogeneous dispersion of these two immiscible liquids. High-shear homogenization, impingement with a Gaulin homogenizer, or ultrasonic vibration combined with propeller and/or sweep-blade agitation are several ways to reduce the droplet size of the dispersed phase. By disrupting the cohesive forces of the droplet during this process a homogeneous, uniform size distribution is achieved. However, once the agitation stops syneresis, flocculation, coalescence, agglomeration, Ostwald ripening, creaming, etc. can all happen quickly. In conventional emulsion preparations heat energy is added to reduce viscosity and decrease interfacial tension. As mentioned earlier, the LEE procedure significantly reduces the amount of heat required.

Despite the amount of mechanical and heat energy applied, an emulsion will still fall apart too quickly without the addition of surface-active agents to further reduce the interfacial tension between the dispersed and the continuous phases. Anionic surfactants will arrange themselves with their hydrocarbon tail in the oil droplet and their negatively charged carboxylated ionic heads in the continuous water phase. The steric hindrance and electrical double layer repulsion provided by this monomolecular layer of surfactants surrounding oil droplets prevents their contact and coalescence.

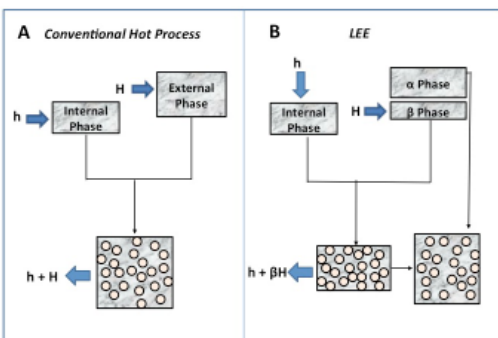


Figure 2: A comparison of conventional versus low energy emulsification (LEE).
From T.J. Lin, Reference 3

...continued on page 8

Deciding what surfactants to use is a challenge. In 1947, Griffin developed a method known as the Hydrophilic-Lipophilic Balance (HLB) System to help formulators. The HLB of a surfactant equals the mole % of the hydrophilic group divided by five. The maximum HLB of a surfactant is 20. One must also know the required HLB of the cosmetic oils in the formula in order to emulsify them. From the known HLB values given in tables, an equation must be calculated to determine the use-levels that strike the right balance between the two. This system really works only for nonionic surfactants that are either ethylene oxide-propylene oxide copolymers (Pluronic, Poloxymers), sorbitan esters with low HLB values (Spans), or ethoxylated derivatives of sorbitan esters with high HLB values (Tweens). Another way, which works with almost any type of surfactant, is the oil solubility method, which comes again from Dr. T.J. Lin. It involves titrating water into the hot oil phase (containing an emulsifier) with mixing until it no longer turns clear. The best emulsifier is the one that incorporates the highest amount of water before remaining cloudy.⁴

Problems may arise from using surfactants as emulsifiers. Excessive levels may lead to the formation of clear microemulsions. Some surfactants cause dryness and skin irritation. Nonionic surfactants may render preservative systems ineffective to control microbial proliferation. Surfactants may tend to emulsify and wash away sunscreen actives upon immersion in water leaving skin unprotected. Because of concerns like these it is sometimes wise to consider alternative emulsifiers. Emulsifiers may also come in the form of hydrophilic colloids, amphiphathic polymers (to be discussed later), or two-faced Janus particles to form Pickering Emulsions.⁵

| NONIONICS | | |
|---------------|----------|-----------------------------|
| WATER PHASE | [Wgt.%] | Functionality |
| Water | 60-90 | Diluent |
| Humectant | 2-7 | Cushion, prevent drying out |
| Preservative | 0.05-0.5 | Product protection |
| Surfactant | 0.25-2.0 | Emulsifier for stability |
| Thickener | 0.1-0.75 | Improved stability |
| Emollient | 0.5-2.0 | Elegant skin feel |
| OIL PHASE | | |
| Esters | 1.0-7.5 | Elegant skin feel |
| Cosmetic Oils | 2.0-10.0 | Elegant skin feel |
| Surfactant | 1.0-5.0 | Emulsifier for stability |
| OTC Actives | By law | Sunscreens, etc. |
| OTHER | | |
| Preservative | 0.1-1.0 | Product Protection |
| Perfume | 0.1-1.0 | Consumer Preference |

Figure 3: A typical O/W macroemulsion.

Although there are many exceptions, Bancroft's Rule states that the phase in which the emulsifier is the most soluble becomes the external phase by lowering the interfacial tension on that side of the film.⁶ With careful observation during the preparation of emulsions one will discover that the viscosity of an emulsion will change dramatically at a certain temperature. The point at which this occurs is known as the Phase Inversion Temperature, or PIT. Sometimes it is referred to as the Phase Transition Temperature, or PTT. It depends upon the concentration of surfactants and other emulsifiers present. Viscosity goes up and electrical conductivity drops at the PIT. If the PIT is not above the storage temperature the emulsion will be unstable.

One less commonly employed technique for hot process water-in-oil emulsification is to create an inverse emulsion by adding the external water phase slowly to the oil phase. The initial water-in-oil emulsion inverts as the remaining water is added.

A Lamellar Gel Network (LGN) formed by combining both high and low HLB surfactants, which raises yield value and promotes emulsion stability. Low HLB surfactants like fatty alcohols create structure and thicken. Glyceryl monostearate and sorbitan monostearate are easier to swell than fatty acids and reduce the amount of high HLB surfactant needed. More polar high HLB surfactants, such as cetearyl glucoside, hydrogenated lecithin, sodium stearoyl glutamide, sodium stearoyl methyl taurate, sodium stearoyl lactylate, or behenyl trimethylammonium chloride tend to swell the low HLB surfactant to promote lamellar bilayer formation. Ethoxylated surfactants are

not very soluble at, or above, their cloud point. So creating stable emulsions under those processing conditions is not possible. Purposely raising the carbon chain length of either the low HLB or the high HLB surfactant, or the oil phase, will raise the PTT.

High shear mixing or homogenization for prolonged periods at elevated temperatures will decrease the size of oil phase droplets too much. If oil droplets become too small, and their numbers too many, their increased surface area becomes too much for the surfactant to cover and therefore unable to form LGNs. This is a prime example of what Dr. Lin calls the "less-is-more" principle. In this example, less homogenization creates more stability. LGNs are viscoelastic and shear-thinning for easy dispersal and application to the skin. Most O/W skin care emulsions sold globally are based on LGNs stabilized with polymers.⁷

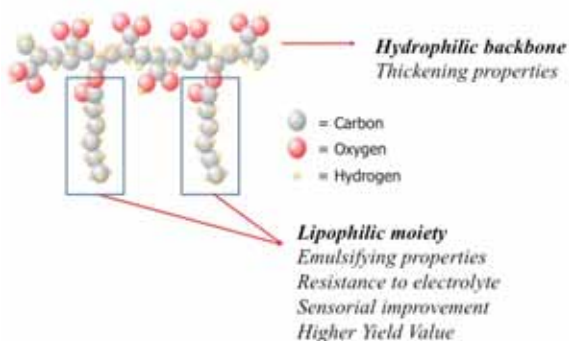


Figure 4: An example of an associative thickener used in emulsions: acrylates/vinyl isodecanoate crosspolymer.

Enter Polymeric Emulsifiers

An early article by Dr. R. Lochhead covered the utility of including polymers in emulsions.⁸ Synthetic polymeric thickeners may be homopolymers, copolymers, or crosspolymers. Polymers of acrylic acid, or PAAs, are especially useful in most any kind of formulation, which contains some water. Perhaps the most widely used example of this type of polymer is the frequently used homopolymer, carbomer. Such non-associative polymers like carbomer and acrylates copolymer work to stabilize emulsions by thickening the water phase. Introduced more than a decade ago, hydrophobically modified copolymers and crosspolymers of acrylic acid added various lipophilic side chains to

the hydrophilic backbone. All PAAs thicken by intra- and intermolecular chain entanglement, but added hydrophobic moieties have an aversion to water and a greater affinity to one another thereby creating polymer-polymer non-covalent cross-links. This forms a matrix that can profoundly influence rheological properties. These hydrophobes shield the polymer from anionic-cationic polymer interactions that precipitate neutral polyelectrolyte complexes.⁹ Associative PAAs also provide: greater tolerance to electrolytes, emulsification properties, a more conditioned skin-feel, rapid release of oil phase upon contact with the salts present on skin and other improved performance attributes.

Two exceptional examples of this newer type of PAA rheology modifier with strong emulsification properties are acrylates/vinyl isodecanoate crosspolymer (powder)^{10,11} and acrylates/palmeth-25 acrylate copolymer (liquid).^{12,13} Like others in this class they are multi-functional hydrophobically modified (see Figure 4) alkali swellable associative rheology modifiers with an affinity for both oil and water, and provide finished products with the desirable shear-thinning rheology for easy dispensing from packaging and topical application onto hair and skin. Alky side chains provide association with oil droplets and the potential for increased polymer interactions. The 25 moles of ethoxylation on acrylates/palmeth-25 acrylate copolymer includes sites where hydrogen bonding to adjacent polymer chains and water also become possible. Unlike carbomer, these "Alkylated Carbomers" not only swell to form hydrogels that pack into the water phase to thicken it but also surround the dispersed phase and prevent coalescence by steric hindrance. High molecular weight polymeric emulsifiers bring attributes that low-molecular-weight surfactants cannot (see Figure 5).

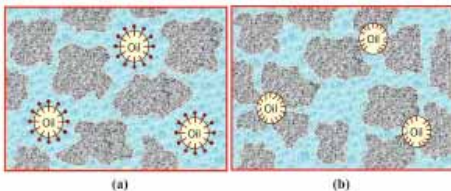


Figure 5: Scheme illustrating the difference between (a) a traditional emulsion thickened with carbomer versus (b) a polymeric emulsion thickened with an alkylated carbomer (acrylates/vinyl isodecanoate crosspolymer).

Normally, when a traditional emulsifier is added to an emulsion system, it breaks up the oil phase, increasing the number of droplets and reducing them in size. The photomicrographs in Figure 6, taken within minutes after completing a simple cold process emulsion, shows how increasing the level of the polymeric emulsifier, acrylates/palmeth-25 acrylates copolymer, has similar effects. These polymers also help regulate viscosity drift on storage under various temperatures. One predictor of longer-term emulsion stability is to compare the viscosity at 25 °C and again at elevated temperature. A viscosity decrease of 20% for every 10 °C above 25 °C is usually acceptable. A cause of concern might be if the measured viscosity at 45 °C is >50% lower than the value at 25 °C.

Acrylates/palmeth-25 acrylates copolymer can also emulsify oils with a wide range of required HLB values. Just as in traditional hot process emulsions, increasing the concentration of the oil phase increases viscosity. Furthermore, the hydrophobic modification to the acrylate backbone and the associative nature of the polymer significantly increases yield value over non-associative carbomer homopolymers. It should be noted that there is not a direct correlation between viscosity and yield value.

A shear-thinning rheology is typical of cosmetic emulsions. They may be time-independent pseudoplastic in nature, which may be obtained using polymers of acrylic acid. Or, time-dependent thixotropic emulsions characterized by the extra time required for viscosity to recover following the cessation of shear. Shear-thinning viscosity permits products to flow easily from packaging and distribute evenly on the substrate. Various gums, clays, organoclays, silicas, cellulose, and polyethylenes, can achieve one or the other type of rheological profile.

Making cold process emulsions with either of these polymers is a simple three-step procedure: 1) disperse the polymer, 2) homogenize the oil and water phases and 3) neutralize the polymer with a suitable base. The potential for developing a heated or cold process one-pot making procedure for emulsions is possible using either of these two examples of hydrophobically modified polymers. Acrylates/vinyl isodecanoate crosspolymer may be added to water or oil phases in either a side kettle or directly into the main mix tank. Acrylates/palmeth-25 acrylates copolymer goes into water virtually instantaneously after which each subsequent ingredient can be added on top with adequate agitation.

Of course, the possibility of cold process emulsification hinges upon the melting point of any waxes that may be in the formula. All, or at least a sufficient portion, of the oil phase might have to be heated to incorporate these materials. In that case one may use the LEE procedure in combination with amphiphathic polymers as primary or secondary emulsifiers.

Things to Keep in Mind

Macroemulsions are thermodynamically unstable. The key to creating the most stable O/W emulsions is retarding the interaction of dispersed oil droplets. To start, the proper amount of mechanical or heat energy required for

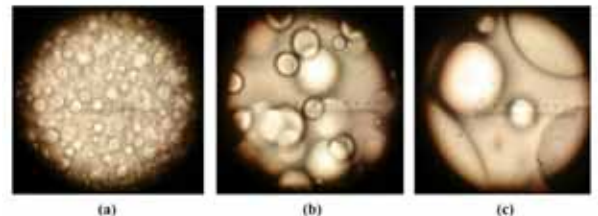


Figure 6: Photomicrographs taken within minutes after completing a simple cold process emulsion with mineral oil and a thickener/emulsifier, acrylates/palmeth-25 acrylates copolymer. (a) 5% polymer, (b) 2.5% polymer, and (c) 1.25% polymer. Since these photographs were taken immediately after the emulsification procedure, this demonstrates that polymer is acting similar to a surfactant in its ability to disrupt the cohesive forces of the dispersed oil.

...continued on page 10

your formula must be determined. Increasing the viscosity and yield value of the formula will improve the stability. Selecting the best emulsifier(s) is critical to success. The addition of polymers will increase the viscosity of the water phase. Oil phase thickeners are less readily available and can require very high temperatures to incorporate. Reducing the droplet size and/or the concentration of the dispersed phase can significantly increase viscosity leading to a more stable emulsion. Not mentioned earlier is that low levels of electrolytes may actually help stabilize an emulsion. Perfumes can have a large effect on viscosity. Also, be cautioned to avoid aeration during the process. Entrained air bubbles adds a third gaseous phase creating a multiple emulsion and a less stable situation.

Polymers that Help Emulsions “Go Green”

In conclusion, with hydrophobically modified alkali swellable amphipathic polymers one may develop an emulsion with even greater energy efficiency than what may be realized following Dr. Lin’s LEE process. Cold process emulsification with polymeric emulsifiers provides even greater savings and increased manufacturing capacity. In keeping with Principle No. 6, let’s all try to develop robust formulas that minimize the environmental impact of our manufacturing processes. I’d rather do that than drive a Prius to make my contribution to saving Mother Earth for future generations. A tip of the ol’ cap to all the Prius owners reading this article. You are better persons than me.

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About the Author

Joe is currently the Technical Marketing Manager Personal Care at 3V Inc. During his career in the personal care industry Joseph Albanese worked for Avon, Shulton, and Colgate-Palmolive in both process and product development groups.

His employment on the supply side of the industry included more than 12 years at GAF/ISP where he went from formulation chemist to manager of the Hair Care Applications/Tech Service lab. He is a graduate of the F.D.U. Cosmetic Science M.A. Program.

He has been a member of the SCC since 1984 and is currently Area I Director.



Job Opportunities

POSITIONS AVAILABLE

- **ASSISTANT MICROBIOLOGIST (#1409-01).** Merle Norman Cosmetics seeks an Assistant Microbiologist to perform microbiological lab testing, keep laboratory stocked with supplies, provide accurate and efficient document control and data management, and any other tasks as assigned to meet company goals. Position is based at our Corporate Headquarters near the L.A.X. Airport and will require reporting in to this location on a daily basis. BS Microbiology (or related 4 year degree), 2+ years experience working in a microbiology lab in the cosmetic, pharmaceutical or food industry. Experience in cGMP work environment is an advantage. Detail oriented; ability to adapt to changes. Send resumes to mncresume6@merlenorman.com.
- **LABORATORY TECHNICIAN (#1409-02).** Chatsworth Based Formulation/Product R&D laboratory is looking for a Lab Tech with 1-2 years bench experience in the cosmetics and personal care field. Candidates will assist in developing formulations, new product applications, and assessment of stability technology used in a variety of personal care applications. Candidates must possess a Bachelor's degree in chemistry or related field AND knowledge of personal care formulations through product development experience on the bench. MUST be a team player, have excellent decision making and problem solving skills, the ability to interpret experimental results, be neat, organized, detail oriented, have the ability to adapt to changes at a minutes' notice. Salary negotiable DOE. labtech@aboverinaldilabs.com.
- **MECHANIC (#1409-03).** McKenna Labs, a contract manufacturing company specializing in personal care products is seeking a Mechanic. Description: Setup, troubleshoot, diagnose, and solve problems to minimize production downtime. Must be capable of troubleshooting a variety of equipment. Minimum of 4 years working experience in mechanical repair desired. Working experience in a manufacturing (cosmetic/personal care) company preferred. Please send resumes and salary requirements to careers@mckennalabs.com.
- **COMPOUNDER (#1409-04).** A growing Hair Care Manufacturing company located in Corona. Is looking for a Compounder with a minimum of 1 year experience with cosmetics products preferable. Candidates must have a knowledge in GMP'S standards, able to multitask and must be fast learner with communication skills. Bilingual preferable. Interested candidates send your resume along with salary requirements to paola@developlus.com.
- **R&D COORDINATOR (#1409-05).** Dermalogica is looking for a R&D Coordinator. In this position, your responsibilities will include providing assistance to the R&D and QC departments to support new product development requirements. Also, you will provide technical support with existing products in the area of evaluation, documentation, sampling and testing. We're looking for a minimum of 1 year laboratory experience, preferably in a cosmetic or pharmaceutical environment. Proficient in Microsoft Word applications. (No relocation). Please visit our website at www.dermalogica.com to apply.
- **FORMULATION CHEMIST (#1409-06).** Allure Labs, Inc, a fast-paced and exciting East Bay skin care manufacturer located in Hayward is looking for a Formulation Chemist that performs quantitative and qualitative analysis on raw materials using laboratory experimentation. Formulate raw materials to meet ingredient standards and deadlines. Follow industry standards on scientific significance, accuracy, safety and record keeping and other duties. Obtain at least an Associates degree in Chemistry, BioChemistry, Chemical Engineering, Biology or related disciplines. Must be detailed oriented, maintains reliable attendance, excellent communication and documentation skills and a team player. Please send resume to denise@allurelabs.com. Please no phone calls.
- **R&D CHEMIST (#1409-07).** Thibiant International, Inc., a leader in the manufacture and distribution of high-end personal care products located in Chatsworth, CA, is looking for a R&D Chemist to join our dynamic team. Candidate must have 3-5 years' experience formulating skin and hair care products, BS degree in Chemistry or related science, and preferably from a contract manufacturing environment. Candidate must possess a passion for excellence, is self-motivated, team-oriented, and able to thrive in a fast paced environment. We offer a competitive salary + benefits package. Please send resume and salary history to nschussman@thibiant.com.
- **R&D DIRECTOR - APPLICATIONS (#1409-08).** The role is newly created, and will report directly to VP R&D at Rivertop. Will be expected to grow and manage a team of scientists, supporting R&D and Commercial efforts in the technical development of Rivertop's portfolio for use in the Global Detergents Market. Rivertop Renewables™ produces novel chemicals that allow our customers to unlock innovation in their product lines and create new competitive advantages. Applying inventive, green methods to traditional chemistries, Rivertop manufactures organic acids that offer unique, sustainable functionalities without compromising customers' cost position. Full profile, and to apply, please visit: www.rivertop.com.

Job Opportunities

POSITIONS AVAILABLE

- **SENIOR MANAGER OF RESEARCH AND DEVELOPMENT (#1409-09).** Senior Manager of Research and Development is a results-driven professional responsible for R&D in a luxury cosmetic company. Responsibilities include looking for new and innovative ingredients and raw materials for inclusion in new formulas. Responsible for overseeing Product Regulatory and Claims Substantiation testing and submittal to retail accounts for legal review. Other responsibilities include evaluating new product concepts and reformulating & improving existing products. This person must clearly understand their role in project timelines and work within specified cost constraints. You will also interact with outside chemists and contract manufacturers providing direction, recommendations and approvals. Send Resume: hr@katesomerville.com.
- **SENIOR COSMETIC CHEMIST (#1409-10).** Custom Research Labs a private label manufacturing company in Gardena is currently seeking a Senior Chemist with experience in formulation of skin care, hair care and OTC products. Understanding FDA regulations required. Please send resume and brief salary history via (310) 878-6959 or email to americancosmetics@hotmail.com.
- **QC/REGULATORY SPECIALIST (#1409-11).** Markwins, leading cosmetics and beauty care collection in City of Industry of California seeks QC/Regulatory Specialist on domestic and international level (Canada, EU), work with consultants to register facilities and OTC products with US-FDA and Health Canada, work with EU CPNP to notify products, complete product filings with Health Canada. CDPH, CSCA, support overseas QA department and supervise domestic quality control area, assist with raw material review and work with Marketing in artwork label review. 3 years+ of experience in regulatory affairs in cosmetic/personal care products. Please email full resume to hr@markwins.com.
- **TERRITORY SALES MANAGER (#1409-12).** Floratech, an ingredient manufacturer and supplier to the personal care products industry, based in the Phoenix, Arizona area, is seeking an experienced salesperson. The ideal candidate will have a technical background and 5+ years of professional experience in personal care as a formulator or technical sales manager of cosmetic ingredients. Extensive domestic and international travel involved. Highly motivated individual with strong organizational skills required. Please send your resume to Carol Hynes, Human Resources Manager – carol.hynes@floratech.com or fax to 480-892-3000.
- **COSMETIC CHEMIST (#1410-02).** Responsible for R&D, ensuring formulas meet expected performance, safety and Regulatory requirements so that they can be produced in manufacturing. This position reports directly to the Laboratory Manager. Experienced candidate for hair and skin care. Responsible for developing innovative formulas from concept to finish, trouble-shooting formulations, duplicating formulas, understand ingredient functions, production on scale-up, meeting with customers, vendors, internal sales and operations. Must be: highly organized, have the ability to effectively assess issues and resolutions, knowledgeable about the latest ingredients and application, enthusiastic, team player, face paced, self-starter, independent thinker, quick learner, have bench experience, and computer knowledge. Bachelors degree in chemistry or a related field is a plus. 5+ years laboratory experience and possess good verbal and written skills. Send resume & salary requirement - Paul.Dembow@aznat.com.
- **CLINICAL RESEARCH MANAGER (#1410-03).** Tarrytown, NY: The Clinical Research Manager leads a team of four scientists conducting in vivo clinical and consumer testing to support ingredient claims. He/she: Identifies new and innovative clinical product claims, develops in vivo test methodologies to support those claims. Continually assesses instrumental techniques used in industry and proposes new instruments to add to our research center. Works with clinical team to document SOPs and improve clinical research techniques and quality. Is key member of biological actives development team and work intensively with our teams in France and Germany. For additional information, please visit: <http://jobs.basf.us>, keyword 1403051.
- **CLINICAL RESEARCH ASSOCIATE (#1410-04).** Tarrytown, NY: If you are passionate about clinical research, please read on! The Clinical Research Associate carries out hands-on in vivo clinical research on active ingredients and product formulations in the field of home and personal care, with a focus on biological actives for skin care products; organizes and analyzes clinical data based on a solid knowledge of test statistics; develops and improves clinical standard operating procedures and test methods based on industry and BASF standards; and presents technical information to the scientific community and to customers. For additional information, please visit: <http://jobs.basf.us>, keyword 1403052.
- **R & D MANAGER – FORMULATIONS (#1410-05).** Naturals Products Group is looking for a superstar R & D Manager. Come supervise the formulation team for new product development! This role interfaces with sales, marketing and regulatory teams to coordinate projects and optimize flow within the lab efficiently. Requirements: 3+ years supervisory experience with an R & D formulation team, 5+ years working in skin, hair and oral care, including sun and acne care products, must have experience working directly with Marketing and/or Private Label clients to develop products and experience in natural/organic materials. Email resume to Sonja Kehnt at skehnt@arbonne.com.

Job Opportunities

POSITIONS AVAILABLE

- **PERSONAL SKINCARE SCIENTIST (#1410-08).** The Clorox Company has a Personal Skincare Scientist (Associate Research Fellow) open within our Advanced Technology division in Pleasanton, California. Advanced degree in Cosmetic Science, Chemistry, Biochemistry, Chemical Engineering, Molecular Biology, or related field. 10+ years' experience in skincare products and technology. Knowledge of skin biology and biochemistry including the effects of aging and senescence, skin health and the use of therapeutic agents. Track record of using structure - function relationships between ingredients and skin biology to design and formulate products that deliver a variety of benefits for cleaning and care of skin. Please email resumes to tiffany.matthews@clorox.com.
- **TECHNICAL SALES REPRESENTATIVE (#1410-09).** Nexeo Solutions seeks a Technical Sales Representative in the Los Angeles California area for their Personal Care business segment to develop relationships with chemists and formulators, to develop growth opportunities by introducing products and solutions to help customers meet their objectives. The ideal candidate for this role will have a Chemistry based Bachelor level degree with 5 to 7 years of formulation experience, effective technical support experience, and experience selling specialty chemicals at a technical level. Please apply by emailing your resume to mgruen@nexeosolutions.com. For a full position description – please follow this link http://nexeo.taleo.net/careersection/jobdetail.ftl?job=11212&lang=en&sns_id=mailto#.VCHMrZIA4Dg.mailto
- **PRODUCT DEVELOPMENT SPECIALIST / ASSISTANT (#1410-10).** Responsible for supporting the development of long-term product pipeline by researching, collaborating and proposing cutting-edge product innovations that support brand strategy, fill need gaps and meet financial objectives. Works closely with labs to understand new trends, technologies and ingredients in order to develop products that are first to market, differentiated, and iconic.
- **TEMPORARY TECHNICAL SALES SUPPORT (#1410-12).** Lipscomb Chemical is a custom technical sales company looking for a full-time temporary Technical Sales Support at our Long Beach office, facilitating the flow of technical and regulatory information among customers, suppliers and sales reps for the personal care, food and nutraceutical industries. Individual must be self-motivated, hold strong communication and organization skills and have the ability to multi-task while maintaining priorities. Please submit resume to lhoang@lipscombchemical.com.
- **CHEMIST/COMPOUNDING MANAGER (#1410-13).** A growing cosmetic manufacturer located in Chatsworth, CA is looking for an experienced chemist who can oversee our compounding department and help with R&D. Company does OTC products in addition to non-OTC. Responsible for all paperwork (batch cards, work orders, etc.) and supervision of production batches, including making adjustments, providing instruction to compounders, and addressing technical assurance issues. Must be able to scale up prototype formulas to full scale production batch sizes. Must have BA/BS in chemistry and 3-5 years of experience. Base Salary plus bonuses, health insurance. Send resume to lm@dermae.net or fax 805 582 2730
- **R&D COLOR MANAGER (#1410-14).** Merle Norman Cosmetics is currently seeking a Manager, R&D Color who will be responsible for guiding the color lab in evaluating new technologies and for executing approved projects per the specifications of the new product briefing documents. This individual is also responsible for making sure each product is commercially viable for manufacturing and is able to secure the smooth and successful transition from lab to scale-up. This position is based out of our Corporate Headquarters located near the L.A.X. Airport and will require reporting in to this location on a daily basis. Mncresume9@merlenorman.com.
- **JR. CHEMIST (#1410-15).** YG Laboratories, a private label/contract manufacturer celebrating 40 years of business in Fountain Valley seeks Jr. Chemist to assist with formulations of skin care products. Candidates will assist in developing formulations, sample preparation, generating preliminary ingredient lists, stability and microbiological testing. Candidates must possess an AA degree or 3 + years lab experience and knowledge of personal care formulations through product development experience on the bench. Must be a team player, have excellent problem solving skills, the ability to interpret experimental results, be neat, organized, detail oriented, clearly communicate results and have strong Microsoft computer skills. Please send your résumé and salary history to diahnep@yglabs.com.
- **ASSISTANT TO THE OPERATIONS MANAGER (#1411-02).** A successful natural skin care company seeks an energetic, detail oriented and organized assistant to the Operations Manager. Excellent math and analytical abilities along with top communication and writing skills are required and intermediate experience with excel spreadsheets and bilingual (Spanish) preferred. Our fast paced environment requires excellent follow up skills and time management and the ability to work both independently and in a team setting. Remuneration commensurate with experience. Please email resume and salary history to albert@californiababy.com.

Job Opportunities

POSITIONS AVAILABLE

- **R&D CHEMIST (#1411-04).** Sombra Cosmetics Inc, a personal care manufacturer in Albuquerque NM, is looking for a R&D Chemist to assist with formulations of personal care products of Lotions, cleansers, SPF products etc. The position will be responsible for bench formulations, generating ingredient lists and product marketing briefs for the formulas they develop, regulatory review of ingredients, troubleshooting batches, and scale up. The ideal candidate will have a BS in chemistry, or equivalent, and 1 to 3 years of experience in cosmetic formulating. Please email resume and salary requirements to resume@sombrausa.com.
- **FORMULATION CHEMIST (#1411-05).** Responsible for assisting with formulations of personal care products of lotions, cleansers, sunscreens and other innovative premium skin care products. The position will be responsible for bench formulations, generating ingredient lists, product marketing briefs, regulatory review of ingredients, troubleshooting batches and scale up. Duties include specification development, routine analysis, stability testing and ingredient research. The ideal candidate will have a BS/BA in Chemistry, Biology or related field, 5+ years R&D bench experience with strong expertise in formulating premium skin care products. Broad knowledge of raw materials, surfactants, emulsions and industry trends is essential. Interested candidates should submit their online application at this link. For any questions, please contact Fairyal Day at atday_fairyal@allergan.com.
- **CHEMIST/CHEMICAL ENGINEER (#1411-06).** Method Products PBC is seeking a results-driven chemist or chemical engineer to fill the Green Chef Director role. Extensive experience in formulation and environmental chemistry is required, as well as experience in product commercialization for home and personal care categories. Unique skills or a background that would complement method's chef team a plus (process scale-up, operations/quality, consumer research, analytical test experience, etc.) Education BS in Chemistry, Chemical Engineering or related field. Experience at least 10 years in consumer packaged goods industry, 2-3 years of group management and team leadership desired. Location: San Francisco, California. Please go to methodhome.snaphire.com
- **SR. COLOR CHEMIST / FORMULATOR (#1411-07).** We are seeking a Chemist/Formulator to join our color cosmetic R&D department. Candidate must be able to independently track progress of formulations through testing and validation in accordance with strict project timelines. Must be able to document, report and present technical findings. Min. of BS or BA degree in Chemistry, Pharmacy, Engineering or equivalent science. 5+ years of relevant laboratory experience, experience in color cosmetic formula. Knowledge of cosmetic raw materials. Must be flexible and work well under pressure. Good performance, attendance and safety record in current position. Applications can submit their resume to jimmy@fmklabs.com
- **COSMETIC LAB TECHNICIAN (#1411-08).** Cosmetic Lab Technician - Cosmetic Company in SFS is seeking a Lab Technician with 0-3 years in a cosmetic lab and manufacturing environment. Duties include formulations of Skin Care and Hair Care products and the coordination of projects with in the lab. The Job also involves working with manufacturing department on the pilot and production batch adjustment and writing SOPs or any other documents for related areas. Experience with stability testing and quality control is a plus. Please send your resume to klewis@actlabs.us
- **PRODUCT DEVELOPMENT; ASSISTANT MANAGER (#1412-01).** Irvine, CA (Contract-to-Hire) The Assistant Manager, Product Development manages the product development process from formula concept to pilot production for skin care categories. Will interact with other teams (Marketing, Regulatory, Supply Chain) and ensure timelines are met. Duties include managing formula safety testing, clinical efficacy lab testing, formula evaluations, creating and updating competitive product and latest trend reports, and identifying new ingredients and technologies by attending supplier meetings and industry events. Qualifications include: Bachelor's Degree in Biology or chemistry preferred. Minimum of 3 to 5 years product development experience in skin or personal care. Familiarity with Asian formula and regulatory guidelines preferred. Please send resumes to awilson@arbonne.com
- **QC CHEMIST (#1412-02).** The QC Chemist will execute wet lab tests and instrumental analysis to ensure that cosmetics and drug products meet the criteria of quality, purity, and characteristics they are intended. Duties include: Run wet chemical assays and FTIR analysis to test raw materials or products. Review data for thoroughness. Perform trending activities of all data generated in the lab and in production. Report any deviations from procedures to manager. Requirements include: Bachelors of Science Degree in Chemistry or Biology. Minimum two years bench-level chemistry in pharmaceutical or cosmetic industry. Experience with instrumentation (e.g. FTIR, viscosity, pH, TOC.) and wet chemistry. Please send resumes to awilson@arbonne.com

Job Opportunities

POSITIONS AVAILABLE

- **R & D TECHNICIAN (#1412-03).** Chatsworth, CA: The Technician works in R&D lab and creates lab scale batches. Testing raw materials for equivalency study on marketed products. Aid in batch investigations. Sample batches in glass or final packaging; label and prepare documentation for submission. Test new RM on marketed products. Assist in sourcing new raw materials. Conduct laboratory tests with minimal supervision. Record and report data accurately. Perform stability and troubleshoot unstable formulas. Qualifications: B.S. in Chemistry. Minimum 2 years as R&D Technician in personal care industry with experience creating batches on the bench. Compliance knowledge in cGMP, GDP and GLP Please send resumes to awilson@arbonne.com.

POSITIONS WANTED

- **LABORATORY TECHNICIAN (#1407-01).** I am a recent graduate from the University of Illinois at Urbana-Champaign with a degree in molecular and cellular biology. I am interested in a full time position as a laboratory technician to learn the processes and techniques that are behind cosmetic chemistry. I have experience in laboratory settings, both chemical and biological, and am a fast learner with keen attention to detail. Please feel free to contact me at k.christinahan@gmail.com
- **PERSONAL CARE CHEMIST (#1407-07).** Personal Care Chemist is looking for a Job Opportunity. Salary is negotiable. Please, contact: George (Residing in Southern California) Phone No. Home: 818-892-9269 Cell: 248-705-2217 E-mail: omelnoor1@yahoo.com
- **COSMETIC RESEARCH AND DEVELOPMENT CHEMIST (#1408-05).** I have 7.5 years of experience working as a Senior Researcher in a hospital in Boston, MA doing various clinical research work. I also have Bachelor's and Master's degree in Biotechnology. I have been a member of Society of Cosmetic Chemist for two years now. I am very interested in entering this industry using all the technical and research skills I have developed through my education and work experience. I am a recent graduate from Harvard University Extension School with a degree in Biotechnology. I am interested in a full time position as a Cosmetic Research and Development Chemist. to learn the processes behind cosmetic industry. Please feel free to contact me at sujeeta.silwal@gmail.com, cell: 617-435-8981
- **RESEARCH AND DEVELOPMENT CHEMIST/LABORATORY MANAGER- (#1411-01).** 20+ years of cosmetic experience in Research & Development, Management, Consulting, Production/Manufacturing within the cosmetic areas of Skin, Hair, Color/Make up, Lipstick, Nails, Baby and Children, OTC's, H&I, Aerosols. Background in Laboratory, Production, Manufacturing, and Contact Packaging. Please feel free to contact me at cwhbisme@Gmail.com, Cell: 909-561-0928.

*This monthly listing is a free service to all members of the SCC. To place a technical job listing in the Cosmegram, a maximum of 100 words, **please e-mail your job listing to John Garruto, Employment Chair at jgarruto@skinmedica.com** or Bethany McCarver at bmccarver@skinmedica.com. Please limit to technical positions only. When the position is filled, please notify Bethany McCarver to have the listing deleted. If we do not hear from you, it will be removed after two months. To place an ad in the next issue, information must be received 20th of each month. Please note: We do not knowingly publish listings that have been placed with a search firm and are not responsible for duplicate listings. We also do not release the names of job seekers unless directed to do so by the job seeker.*

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Society of Cosmetic Chemists California Chapter - October Meeting





TONY DOAN & JET LI THE LONG JOURNEY TO AMERICA

John Luna

Deveraux Specialties

Anybody who has been associated with the Society of Cosmetic Chemists are familiar with the names, Tony Doan and James Duong or as he is also called, Jet Li. Their journey from the war torn country of Vietnam to America is epic, their perseverance amazing and to say their escape was daring would be an understatement. I sat down with these two childhood friends at their place of work, Thibiant International.

John Luna: Gentlemen, after hearing a bit of your story I cannot believe I have not written an article about you two guys earlier. What an incredible adventure! You have known each other since childhood?

Tony Doan: Yes that is correct, we were raised in the seaside fishing village of Pham Thiet in South Vietnam. Our dads owned several fishing boats and we would many times go along with them and help with the big catch of the day. We also went to the same elementary school.

John Luna: James, how did you get your nickname Jet Li?

James Duong/Jet Li: Well it is because I am very fast! While you were asking that question I dashed out of the room, started an emulsion batch and quietly came back into the room.

John Luna: no.....no, you didn't leave, I think I would have seen that.

Jet Li: I told you I was fast.

Tony Doan: Yeah he did, look there is the batch stirring, and you can see it from here.

John Luna: How did you??? Oh never mind. Ok let's move on to the daring escape.

Tony Doan: Our families first fled the country when we were 8 years old by boat, after a few days at sea we were caught by the Viet Cong and went to jail for one week. It is an experience we will never forget.

Jet Li: It is a good thing we got caught, the boat we were on was flimsy and never would have made it to our destination, Malaysia.

Tony Doan: We tried again soon after, this time on a much larger boat with a cover. We made it to one of the major refugee camps in Malaysia called Paul Bi Dong.

JL: Did you just make that name up? It sounds like you just made that up.

Tony Doan: No I don't lie, Jet Li does but not me? Never! From there we went to America



where we had relatives. I always tell me three children their freedom came with lots of sacrifices from their parents and grandparents. I feel very blessed for what I have and what this amazingly beautiful country has given me. God Bless America.

JL: Tony I will make that a direct quote, so well said!!

Jet Li: I second that, we are all so grateful for what we have.

JL: So Jet, where did you get your college degree?

Jet Li: I went to Cal Poly Pomona where I obtained my degree in Chemistry, in fact I was President of the Chemistry Club.

JL: Well how exciting!!!!

Jet Li: Yes it was quite a thrill and right after college I got a job as an engineering technician at Rain Bird.

JL: Rain Bird?? You mean the sprinkler company?

Jet Li: Exactly! I would have to run around with a graduated cylinder to measure the droplets from the sprinklers and analyze coverage/surface area. We also had to count the number of rotations of the sprinklers with a stop watch.

JL: I have no response to that. But knowing you for so long, I certainly do not doubt it.

Jet Li: After that thrilling job I went to work at Neutrogena as a chemist and then finally here to Thibiant.

JL: Ok Tony, top that.

Tony Doan: I graduated from UC Riverside with a Biochemistry major. My first job in the industry was at Joico, a part time job which lasted six months. Then I landed at Raffaello where I learned so much from Ralph Akyuz, Susan Goldsberry, and Ike Alibata. I then went back to Joico as a QA engineer which lasted five years and finally to Thibiant where I have worked 11 years and counting.

JL: So Jet, what do you like to do for fun?

Jet Li: I love playing Plants vs. Zombies where

I am proud to say I have reached level 51, if you know the game then you know how difficult that is. I hope to reach the gargantuan level soon.

JL: And just when I thought it couldn't get any better.

Jet Li: Not many people reach that level.

JL: Nobody cares.

JL: So after all you have been through, there probably isn't much you fear?

Tony Doan: No, not much.

Jet Li: Actually, yes I fear being shot. I also don't really like needles, the Dentist and of course, I fear leftovers.

JL: Tony, you are shaking your head.

Tony Doan: After all these years, sometimes he even surprises me.

JL: Jet you are quite a character and I will have you know there are probably at least 8 to 10 people that read this column on a monthly basis so you will be getting quite a few emails, tweets, and text messages.

Jet Li: Tweets?

JL: Yeah I don't know.

Jet Li: So before you leave El Zorro I wanted to teach you a few words in Vietnamese that

just might come in handy.

JL: Oh I would love that!!

Jet Li: Bang Bang Bang

JL: What? Bang Bang Bang???

Jet Li: Really, it is all in the inflection. Low tone Bang, then medium tone Bang and then back to low tone.

JL: So what is the translation into English?

Jet Li: My brother in-law sells office furniture.

JL: Of course! I can see where that can come in handy. Of all the phrases you could have taught me, this is it???

Jet Li: Well it's the easiest.

JL: Tony is this true? Bang Bang Bang in Vietnamese means my brother in-law sells office furniture?

TD: It's a rough translation but yeah it's true.

And with that we ended the interview. Although I have known these two characters for so many years, I came away with such an appreciation and respect of not only the trials and tribulations of their long plight but how these wonderful people from Vietnam challenged the open seas to come to our great country. God Bless the USA and God Bless Tony Doan and even James Duong!!



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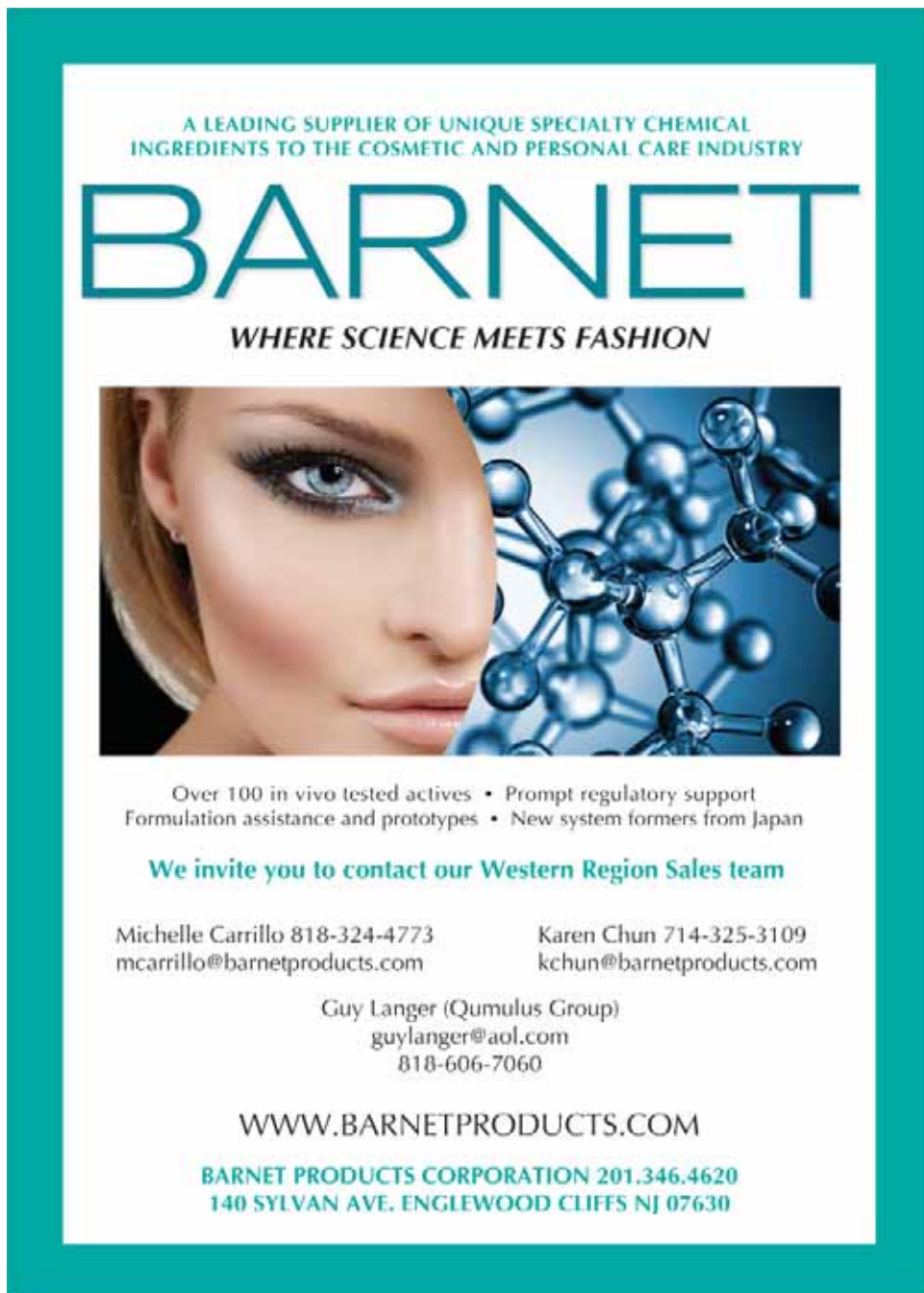
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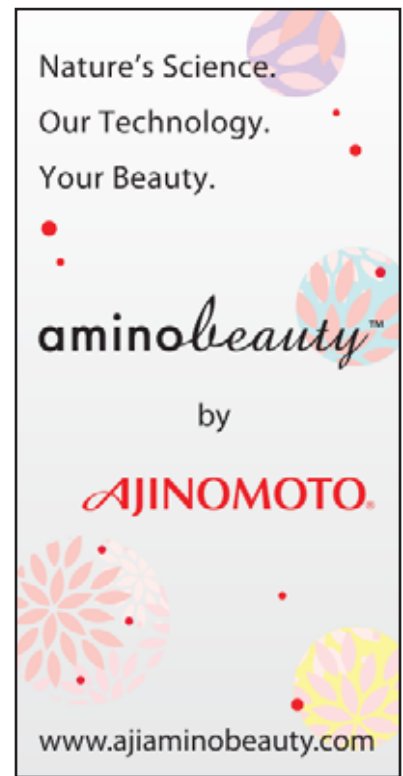
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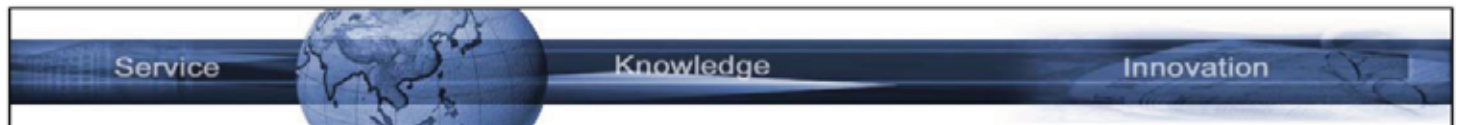


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Become A Sponsor!

The SCC California Chapter is opening sponsorship opportunities to anyone interested in introducing their company during our monthly meetings.

The benefits of sponsorship are to provide you and your company with the following:

- **Approximately three to five minutes to introduce your company and employees, products, capabilities and/or services.**
- **The exclusive right to distribute literature and samples at the monthly meeting.**
- **Optional table adjacent to the registration table to distribute literature and samples by one or two employees.**
- **Your company name will appear on our Sponsor board at the meeting.**
- **Your company name and location will be included in all meeting announcements, including our monthly newsletter (Cosmegram) and all email announcements and reminders.**
- **Your company name will appear for one month on the SCC website as “This Month’s Sponsor”, which will include a link to your company website.**
- **Your donation to sponsor a meeting is tax deductible with our non-profit status.**

Cost: The cost to sponsor a SCC chapter meeting is \$350.

Please contact Yi Hsin Chang if you are interested or have any questions.

Yi Hsin Chang
Sponsorship Chair
ychang@ingsolutions.com

Announcements

Meeting Locations for 2015

- January, March, April, Sept., Oct., Nov. meetings:
Manhattan Beach Marriott, Manhattan Beach
- February meeting:
VALLEY LOCATION
Warner Center Marriott, Woodland Hills!!
- May meeting:
Dukes - Malibu

CA SCC Supplier's Day 2015

Save the Date: October 14th and 15th, 2015

Registration begins February 2015. Visit caliscc.org for more info.

Have your Technical Paper Printed in the Cosmegram!!

Do you have a technical paper you would like to share with our Chapter? Contact Kelly Stone (stone@centerchem.com) to discuss possible submissions.

Membership Renewal Contest Winner



Congratulations to Heidi for winning the Membership Renewal Contest! Thank you for renewing your SCC membership early and helping us towards achieving 100% membership renewal. Enjoy spending the \$100 gift card!!!

Renew your SCC Membership Online Today!

You can now renew online at www.sconline.org. You will need your membership number. If you cannot locate your membership number, please contact Tina-Marie Lesko.

Please Note: If you have moved or changed positions within the past year, please make sure you notify Tina-Marie.

Not Renewing?

While we encourage each member to renew their dues, if there is any reason why you wish to NOT renew, you should resign instead of letting your membership lapse.

If you resign, you will NOT need to pay a reinstatement fee when you decide to return to the Society.

Thank you, Tina-Marie Lesko, CA SCC Membership

SCC Contact Information Changes

If you are a member of our chapter and your information (ie. name, address, company, phone numbers, email address) has changed, please make sure you contact us with the new information so we can update our database. If changes are not sent to us, you may not be getting your newsletter, meeting notices, course registrations, etc. Please contact Tina-Marie Lesko at tmlesko@presperse.com with any changes.

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**Deadline for the January
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