SOCIETY OF COSMETIC CHEMISTS

Carolina Chapter

2021 OFFICERS



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NOVEMBER 18, 2021

Officer Installation Meeting Firethorne Country Club



SENSORY SCIENCE 101:OBJECTIVE SENSORY METHODS

Email sccarolinas@gmail.com for registration information

MEET OUR SPEAKER: AMANDA NOBBE

Amanda Nobbe began at Burt's Bees (Clorox) in 2015 as a senior formulation scientist and later took on an expanded role leading and training a cross-functional sensory panel team that focuses on the look and feel of personal care products. In this new role, Ms. Nobbe designs, executes and interprets sensory studies to help guide key business decisions. This has included designing new sensory experiences, improving product consistency, and scaling up processes from lab to commercial production. She also worked with peers to build consumerproduct models and launch instrumental sensory discovery platforms. She has attended many sensory workshops and conferences throughout her career. In addition, with the support of Burt's Bees, she completed the UC Davis Applied Sensory and Consumer Science Program in 2020. Amanda also holds a Master's in Pharmaceutical Science with an emphasis in Cosmetic Science degree from the University of Cincinnati.



LETTER FROM THE CHAIR:

Cheryl Seidell

Hello Carolina Chapter Members and Friends,

As the leaves change color and weather cools, I find it hard to be believe the year is coming to an end already! 2021 was not quite the full "return to normal" we had all hoped for , but I am looking forward to a busy 2022 with our new board and return to Kiawah.

Please join us on November 18th for our officer installation and technical talk: Sensory Science 101 presented by Amanda Nobbe of Burt's Bees. We hope you can join us for this opportunity to get back together in person! Registration information could be found on the SCC website.

In other chapter news, recent in-person events have been well attended going well. I enjoyed attending the Florida Chapter's Sunscreen Symposium and CA Supplier's Day. NY Supplier's Day is about to start as of writing.

I am also looking forward to New York supplier's day and the 75th Annual Tech Symposium. Hope to see many of you there!

The Naturally Kiawah Symposium will be held October 5-7, 2022. More information could be found on page 3.

Many thanks to our 2021 board members for their great work navigating through another uncertain year. See you all soon!

Cheryl Seidell 2021 Chair

Cheryl



NATURALLY KIAWAH SYMPOSIUM



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CALL FOR PAPERS: NATURALLY KIAWAH SYMPOSIUM

Call for Papers 2022 Naturally Kiawah Symposium

Creating a Sustainable Future of Consumer Products- Beauty & Beyond

October 5-7, 2022 Kiawah Island Golf Resort Kiawah Island, South Carolina

Authors are invited to submit titles and abstracts of no more than 150 words for original papers to be presented in podium format. All topics related to Natural and Green Science will be considered for presentation. Topics of interest for submission of the abstracts are:

- Advances New Natural / Green Raw Materials and Products
- Eco Friendly Manufacturing (carbon footprints, alternate forms of energy, waste management techniques)
- Effect of Natural/Green Products on Skin Biology
- Update on consumer wipes market ex: flushable wipe technology
- Marketing and Consumer Trends- color cosmetics, sustainability, natural trends
- Regulatory Updates- sun care, pet care, supplements, wipes
- Natural Pet Care
- Food Ingredients Technologies (crossover to personal care)
- Dietary Supplements Market Update-ex. beauty supplements, CBD
- New technology for Green/Natural Packaging-ex. biodegradable plastics, refillables
- Other topics related to Natural or Green Science

DEADLINE: March 1, 2022

Abstracts should be single spaced and typed on a separate sheet (150-200 words). Complete generic names as well as the INCI nomenclature are requested for all ingredients (INCI name only allowed in formula presentations if selected). Abstract Submissions should be informative. Please provide a cover sheet containing:

- Presenter Name
- Title (Prof., Dr., Mr., Mrs., Ms.)
- Author(s)
- Company Name
- Telephone Number
- Email Address
- Abstract Title
- A sentence statement of the study's objective
- Brief statement of methods, in pertinent
- · Summary of results obtained
- Statement of conclusions

Please submit your abstract via email to scccarolinas@gmail.com

All abstracts will be reviewed and selected by the CCSCC Education Committee no later than May 1, 2022. After acceptance of abstracts by the committee, all presenters will be required to submit an electronic copy of their full presentation 4 weeks prior to the event date. Final presentations will be due no later than August 31, 2022. No changes in presentations will be acceptable one week prior to or on the date of the presentation

WHAT HAIR CONDITIONING INGREDIENTS WORK BEST?

Perry Romanowski

A topic that we're frequently asked about by consumers is about hair conditioning ingredients and which ones work best for different types of hair. While there is a lot of simple advice given, this is actually a complicated question with many different answers. For cosmetic formulators, it's important to know all the options and the limits of our knowledge in answering this question.

Types of hair conditioning ingredients

In the book Conditioning Agents for Hair and Skin, the authors covered all the major types of conditioning agents. These include:

- Lipids
- Humectants
- Emollients
- Proteins
- Silicones
- Quaternized surfactants
- · Quaternized polymers

Why are conditioners used?

To understand how conditioning ingredients work, it's helpful to know what hair problems conditioners are meant to solve in the first place. Hair conditioners have a few functions, but the main ones are:

- Making hair easier to comb
- Making hair feel better
- Protecting hair from future damage
- Making hair look better

How do conditioning ingredients work?

There are two main ways conditioning ingredients work. One way is by creating a film on the hair fiber surface. This makes the hair feel smoother when touched, reflects light better, and allows a comb to slide past more easily. The other way a conditioning ingredient might work is by penetrating the hair fiber. This helps make the fiber more flexible, which can improve manageability and reduce the chance of the fiber breaking. Some ingredients have the additional effect of attracting water to themselves, which can further improve the flexibility and feel of the hair.

Conditioning ingredients like lipids, silicones, cationic surfactants, and cationic polymers are all about depositing a water-resistant film. Humectants are more about penetrating and attracting water to the fiber.

But one thing that is true for any conditioning ingredient, it has to be left behind on the hair for it to work. Conditioning agents that wash down the drain are not doing anything useful for hair.

WHAT HAIR CONDITIONING INGREDIENTS WORK BEST?

Perry Romanowski

How do conditioning ingredients stay on hair?

There are a few ways:

Leave-on Products

The easiest and most efficient way to get a conditioning agent to stay on hair is to just spray or rub it on. This is how leave-in conditioner or hair mousses work. The downside of these products is that there may not be an even distribution of the product. There may be fibers or patches here and there that consumers miss. Plus, many people don't like the extra step of having to spray something extra in their hair.

Rinse-off products

The most popular types of products are rinse-offs, including shampoos and conditioners. Of these, hair conditioners are much more effective in delivering conditioning ingredients. There are three main mechanisms by which conditioning agents stay on hair.

Hydrophobic Adsorption – Ingredients that are not soluble in water separate from the system during use and deposit on the hair fiber. These include materials such as silicones, lipids and emollients.

Electronegative Adsorption – These ingredients are more compatible with water; however, they have a positive charge which is attracted to negative charges on damaged hair fiber. This adsorption allows cationic surfactants and cationic polymers to stay behind on the hair and resist rinse off. It should be noted that cationic polymers can also follow the hydrophobic adsorption mechanism.

Diffusion Absorption – These ingredients absorb into the hair fiber, where they are shielded from the rinse water and will stay on the hair. Most materials will absorb into the hair a bit, but the time required is so long that the other mechanisms described above are more important. However, for water-soluble ingredients like humectants and proteins, this is the main way that they stay behind on hair.

Conditioning shampoos

While conditioners are designed to effectively deliver hair conditioning ingredients to hair, shampoos are mainly used to remove things from hair. This causes a problem for conditioning shampoos because they need to do the conflicting task of removing something while depositing something else. So, most conditioning ingredients that rely on a hydrophobic mechanism to stay behind won't work because shampoos are made to remove hydrophobic materials. This is why putting oils in shampoos makes little sense. This problem is further impacted by the fact that cationic materials are not compatible with the most common detergents in shampoos, anionic surfactants. So, cationic surfactants can't be used either.

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HChemical reasons

If we consider conditioners work better if they reduce the force needed to comb, improve shine, and make hair feel better, then the following are true.

- 1. Damaged sites: Hair that is more damaged will have more places on it where the cationic materials can bind. This type of hair may benefit from products that have a high level of cationic surfactants. Typically, longer chain (behenyl) conditioning ingredients will work better than shorter chains (cetyl); however, this can be evened out by using a higher level of a shorter chain ingredient.
- 2. Penetration: More damaged hair may also benefit from humectants and penetrating oils since this type of hair is more permeable, and there is a greater opportunity for the ingredients to soak into the hair.
- 3. Less damaged hair may benefit more from ingredients that don't bind to hair at damaged sites, like oils and silicones. Of course, even damaged hair will benefit from these types of ingredients.

Wavy hair problems

Wavy or curled hair has added challenges. For example, its shape will be more prone to tangling. Its cuticle may lift up more at the turns. And it may not reflect light in a manner conducive to shine. So, this hair typically needs more conditioning ingredients to be left behind. But leaving too much behind on hair can make it weighed down and look drab or feel greasy.

Psychological reasons

One last point is that how a person's hair looks and feels is also a result of how they feel at the time they are evaluating the results. In the lab, we may be able to demonstrate that conditioned wavy hair takes less combing force than unconditioned hair, but the consumer experience might not reflect the lab measured result.

A variety of things affect consumer perception, including fragrance, aesthetics of the formula, and even how they are feeling about life at the specific moment. And since everyone likes different fragrances and feels different at any moment, there is little a cosmetic formulator can do about this. What ingredients are better?

Clearly, there is no simple answer to this question. Behenyl based ingredients may provide more slip than cetyl ingredients in a laboratory setting. But then they may feel like they weigh down the hair more, so the user doesn't like it as much. This is the same for things like dimethicone or cationic polymers.

To formulate the "best" conditioner, you'll need to spend time trying different ingredient combinations, combing tresses, and getting consumer feedback. And even then, it's unlikely there is a perfect conditioner blend for everyone.

https://knowledge.ulprospector.com/12219/pcc-what-hair-conditioning-ingredients-work-best/

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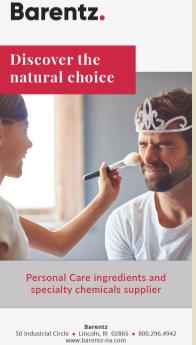


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