

**the  
Source**

*Spring 2019*

# Making Waves in the US Sunscreen Market

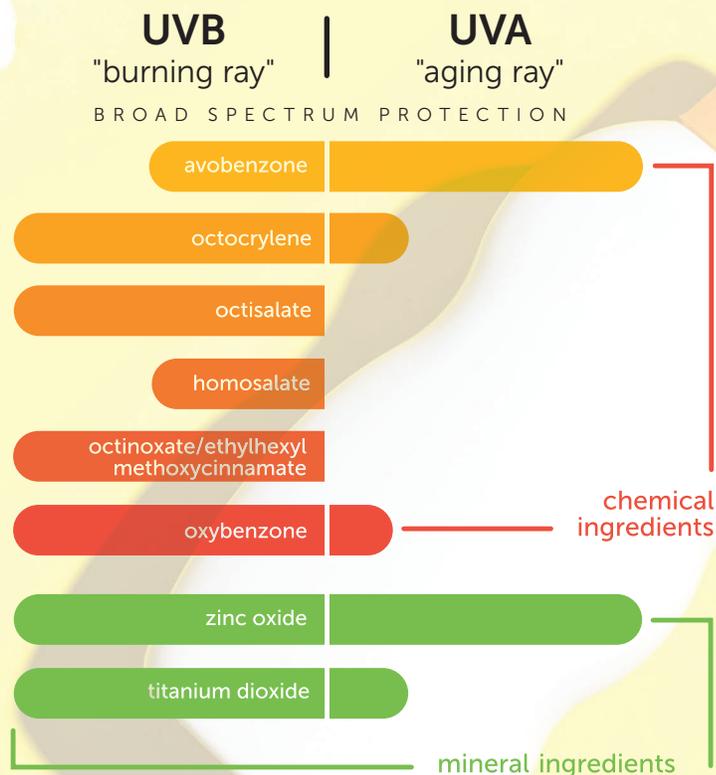


# The Current State of the US Sunscreen Market

In today's market it is becoming nearly impossible to formulate a globally acceptable sun care product due to regional limitations on allowable UV filters, levels and combinations. Today's consumers are looking for their sun care products to contain natural ingredients, while still having high SPF ratings and desirable aesthetics (i.e. low whitening). In this issue of 'The Source' we highlight some of the recent developments in sun care legislation, along with some of the solutions our supplier partners are offering to meet today's challenging formulating demands.

## New FDA Proposed Ruling

In the US, sunscreens are considered OTC products and are therefore governed by the FDA. Unlike the rest of the world, the US only has 16 approved UV filters for sun care; however only 8 are commonly used due to the limitations on use levels and combinations of each. See below for an easy chart on the common UVA & UVB filters.



## Hawaii's Sunscreen Filter Ban

In 2018 Hawaii signed into legislation a bill that will ban the sale and distribution of OTC sunscreens containing two chemical UV filters: Oxybenzone and Octinoxate. Recent studies have shown that these ingredients are causing harmful bleaching to the coral reefs. Both ingredients are present in more than two-thirds of sunscreens sold in the US. While this ban is only for Hawaii, it is expected to have a dramatic impact on sunscreen formulations in the US, mainly in moving away from using these filters altogether. The bill will go into effect January 2021, and recent reports indicated that Key West is considering their own ordinance similar to the Hawaii law.



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On February 21, 2019 the FDA issued a proposed rule that would update regulatory requirements for most sunscreen products in the United States. The goal of this ruling is to improve the quality, safety and efficacy of the sunscreens, while also putting into effect the final monograph regulations for OTC sunscreen drug products as required by the Sunscreen Innovation Act of 2014.

There are several proposals within the ruling including acceptable dosage forms of sunscreen (i.e. sprays, lotions, creams, etc.), requiring SPF 15 or higher sunscreens to also be broad spectrum, and new labeling requirements. However, the most critical item is that the FDA will evaluate 12 of the 16 approved UV filters for safety, as it feels there is not enough data to deem them "GRASE" or general recognized as safe and effective, even though some have been used since the late 1970's. The FDA is asking the industry and other interested parties for additional data to support these 12 ingredients that fall into the "insufficient data" category.

Below is a chart of the current approved US filters and where they stand on the FDA's new ruling:

GRASE for use in sunscreens	Not GRASE for use in sunscreens	Under Review	
<ul style="list-style-type: none"> <li>• Titanium Dioxide</li> <li>• Zinc Oxide</li> </ul>	<ul style="list-style-type: none"> <li>• Aminobenzoic acid (PABA)</li> <li>• Trolamine salicylate</li> </ul> <p>*neither of these ingredients are currently marketed</p>	<ul style="list-style-type: none"> <li>• Avobenzone</li> <li>• Cinoxate</li> <li>• Dioxybenzone</li> <li>• Ensulizole</li> <li>• Homosalate</li> <li>• Meradimate</li> </ul>	<ul style="list-style-type: none"> <li>• Octinoxate (Ethylhexyl Methoxycinnamate)</li> <li>• Octisalate (Ethylhexyl Salicylate)</li> <li>• Octocrylene</li> <li>• Oxybenzone</li> <li>• Padimate O</li> <li>• Sulisobenzone</li> </ul>

Since this ruling is very new its effects are to be determined; however at first glance it might push more formulators & manufacturers towards mineral-only sunscreen products to avoid reformulation down the line if these 12 ingredients in question are further restricted.

To read more about this recent ruling go to the FDA's website >> [bit.ly/FDA-Safe-Sunscreen](https://bit.ly/FDA-Safe-Sunscreen)



## Hallstar's Reef Friendly Formulations



In response to this recent ban Hallstar initiated a "Coral-Friendly Sun Care Solutions" platform where they have utilized their years of experience with photostabilizers that optimize filter performance in order to produce a collection of photostable, high-SPF, and Hawaii-friendly formulations.

They created several Oxybenzone & OMC-free formulations that range from SPF 30 to 70 in a variety of applications (sprays, creams, gels, and lotions). Below are a few examples, or visit their website to find more formulations >> [hallstarbeauty.com/find-formulations/](https://hallstarbeauty.com/find-formulations/)

- Anti-Sand Sunscreen Gel SPF 50  
[hallstarbeauty.com/formula/anti-sand-sunscreen-gel-spf-50/](https://hallstarbeauty.com/formula/anti-sand-sunscreen-gel-spf-50/)
- Broad Spectrum SPF 50 O/W Sunscreen Lotion  
[hallstarbeauty.com/formula/broad-spectrum-o-w-sunscreen-spf-50-lotion/](https://hallstarbeauty.com/formula/broad-spectrum-o-w-sunscreen-spf-50-lotion/)
- Clog-Free Zinc Spray SPF 50  
[hallstarbeauty.com/formula/clog-free-zinc-spray-spf-50/](https://hallstarbeauty.com/formula/clog-free-zinc-spray-spf-50/)
- Cream Come True SPF 70 W/O Mineral Sunscreen  
[hallstarbeauty.com/formula/cream-come-true-spf-70-wo-mineral-sunscreen/](https://hallstarbeauty.com/formula/cream-come-true-spf-70-wo-mineral-sunscreen/)
- Light and Nongreasy SPF 30 Sunscreen Cream  
[hallstarbeauty.com/formula/slick-free-sunscreen-spf-30/](https://hallstarbeauty.com/formula/slick-free-sunscreen-spf-30/)



## Reduce Whitening and Improve Aesthetics with Dispersions

Looking for help formulating sunscreens with only inorganic (physical) filters? We have several dispersions from our supplier partners that make it easy to formulate with TiO<sub>2</sub> and ZnO. These filters typically come in powder form and are very whitening on the skin. Using a pre-dispersed version can reduce whitening and improve SPF performance.

- **Z-COTE® Simple** – BASF's newest addition to their UV filter portfolio is a non-nano Zinc Oxide dispersion. Its physical characteristics support elegant, low-whitening and mild formulations, and it is applicable for baby care. As a pourable, pre-dispersed version of ZnO, it affords formulation ease and may help to reduce manufacturing time.



When compared to two industry benchmarks, Z-COTE® Simple provided higher UVA absorbance and higher stability in formulation (no separation or yellowing). BASF created a non-greasy SPF 30 and SPF 50 formulation that has low whitening properties and is barely visible on all skin types. Visit our website to view the full formulation >> [www.rossorg.com/formulas/](http://www.rossorg.com/formulas/)

Z-COTE® Simple    Benchmark A    Benchmark B



- **HallBrite® EZ-FLO TDX & HallBrite® EZ-FLO TDX Plus** – HallBrite® EZ-FLO TDX & TDX Plus were developed to show how mineral UV filters can be easy to work with and also provide elegant feeling, low whitening, high-performance sunscreens for customers. This was achieved by leveraging a patent-protected C3+ coating system with Hallstar's photostabilizer technology.
  - o **HallBrite® EZ-FLO TDX** is an easily pourable, highly stable (45°C) dispersion of 40% Titanium Dioxide (nano), coated and dispersed in a carrier containing HallBrite® BHB.
  - o **HallBrite® EZ-FLO TDX Plus** is an easily pourable, highly stable (45°C) dispersion of 23% Titanium Dioxide (nano), coated and dispersed in a carrier containing SolaStay® S1, HallBrite® BHB and C12-15 Alkyl Benzoate. It is recommended for formulations requiring higher SPF & UVA-PF values.



## New & Improved Sunscreen Simulator from BASF



The BASF Sunscreen Simulator is virtual lab that provides real-life calculations to quickly test sunscreen performance and enabling the estimation of the Sun Protection Factor (SPF) as well as all common UVA protection metrics. It easily supports the formulator to compose an optimal combination of the UV filters in a sunscreen formulation and helps to shorten the formulation work by providing realistic estimations of the final product performance.

BASF recently updated this industry-leading tool to include new technical benefits along with an improved user experience.

Visit their website to try it today: [www.sunscreensimulator.basf.com/Sunscreen\\_Simulator](http://www.sunscreensimulator.basf.com/Sunscreen_Simulator)



# FORMULATIONS

## Natural Mineral SPF 15 (#AN-002-060-A)

	Trade Name	INCI Name	%	Supplier
A	DI Water	Water (Aqua)	56.70	-
	Glycerin	Glycerin	2.00	
	Cosphaderm Propanediol Nat	Propanediol	2.00	Cosphatec/Ross
	Cosphaderm X 34	Xanthan Gum	0.40	Cosphatec/Ross
	Sensiva PA 20	Phenethyl Alcohol, Ethylhexylglycerin	1.00	Schülke/Ross
B	Olivem VS Feel	Cetearyl Alcohol (and) Cetyl Palmitate (and) Sorbitan Palmitate (and) Sorbitan Oleate	4.00	Hallstar/Ross
	Eumulgin SG	Sodium Stearoyl Glutamate	1.00	BASF/Ross
	Z-cote LSA-UC	Zinc Oxide	12.00	BASF/Ross
	Myritol 331	Cocoglycerides	10.00	BASF/Ross
	Floramac 10	Ethyl Macadamiate	5.00	Florotech/Ross
	Campo South Pacific Monoi Oil	Plumeria Acutifolia Flower Extract	3.00	Campo/Ross
	Cetiol Sensoft	Propylheptyl Caprylate	2.00	BASF/Ross
C	Covi-ox T-70 C	Tocopherol	0.20	BASF/Ross
	CP Oat Avenanthramides Extract	Avena sativa (Oat) Kernel Extract, Water, Glycerin, Potassium sorbate	0.50	Ceapro/Ross
	BioScent Geranium Oil	Pelargonium Graveolens Flower Oil	0.20	BioOrganic Concepts/Ross
D	Citric Acid 50% Soln	Water (Aqua); Citric Acid	qs	-

- PROCEDURE**
- 1) Add **Phase A** ingredients one by one. Mix well and heat to 75-80°C
  - 2) Premix **Phase B** ingredients. Heat to 75-80°C. Mix well and add to A. Homogenize the combination and start cooling down slowly.
  - 3) Add **Phase C** ingredients one by one to the main batch at 40°C
  - 4) Adjust the pH to 7.5-8.0

### SPECIFICATIONS

pH @25°C: 7.9  
 viscosity @25°C: 17,472 cps  
 appearance: Opaque Viscous Cream  
 color: White  
 odor: Herbal

### FEATURES AND BENEFITS

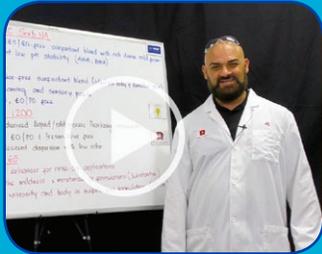
- This is a mineral broad spectrum sunscreen using generally natural-derived ingredients. It is a safe and gentle formulation designed for baby and sensitive skin. It has light, non-greasy texture and delivers very minimal whitening on the skin. This carefully engineered sunscreen utilizes gentle and skin friendly emulsifiers.

### FORMULA CLAIMS

- Broad spectrum mineral sunscreen
- Gentle, safe and non-toxic
- Light, non-greasy
- Baby and sensitive skin friendly

## New Video Release

In this latest "Intelligent Ingredients" Whiteboard video release Ali Witwit discusses the features and benefits of four **Performance Concentrates from BASF** including: Plantapon LGC Sorb NA, Plantapon TF, Euperlan PK 1200 and Lamesoft PO 65. You can visit our website or YouTube channel ([youtube.com/user/rossorganic](https://youtube.com/user/rossorganic)) to watch.



Performance Concentrates from BASF

## New Members of the Ross Team



Ann Amiset  
Sales Coordinator



Tim Murdoch  
Technical Sales



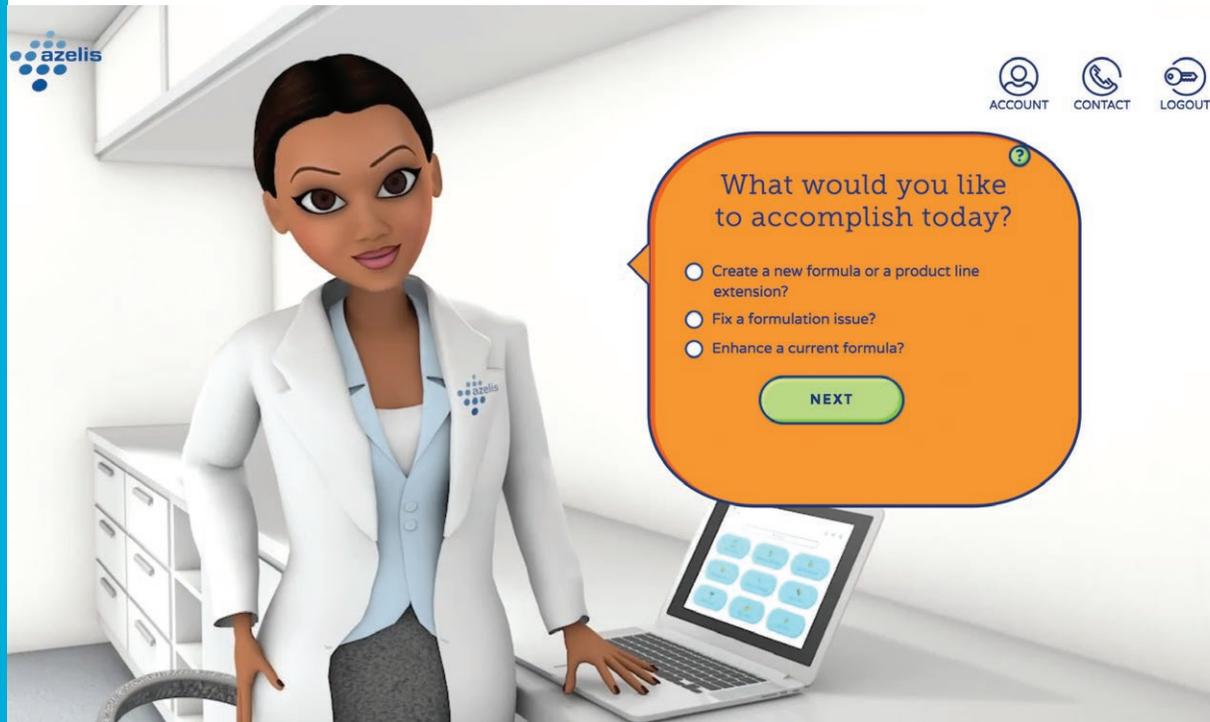
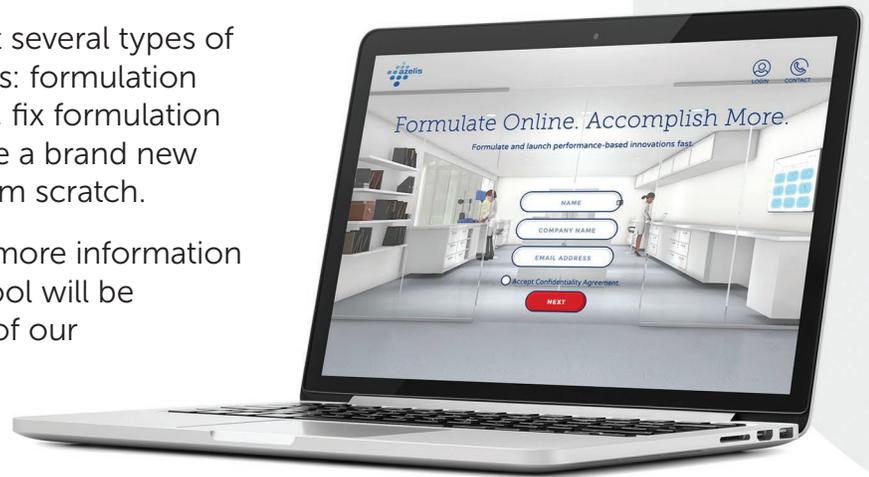
Carla Hockless  
Customer Service

## E-Lab coming soon to Ross Organic!

The e-Lab allows you to funnel your formulation projects to our hard asset lab for technical collaboration, and managing the projects online easily and conveniently from start to finish. Our chemists will communicate with you through e-Lab, providing you with automated updates throughout the entire formulation process.

You can submit several types of projects such as: formulation enhancements, fix formulation issues, or create a brand new formulation from scratch.

Stay tuned for more information on when this tool will be available to all of our customers!



## Find the ROSS Ladybug

Can you find the ROSS Ladybug? It is hiding here somewhere in The Source. Email your answer to [info@rossorg.com](mailto:info@rossorg.com) with subject line "ROSS Newsletter Contest" and you will be eligible to win a special prize (over \$50 value).



## Tim Murdock - Technical Sales Representative



**Where was I born?** I was born in Riverside, CA. However, I moved to Washington State with my family when I was very young and was raised there.

**My favorite subject in grade school was...** PE! I loved sports since I was kid and couldn't stand school – I just wanted to run around.

**What did you want to be when your grew up?** I wanted to be a Doctor! I loved the idea of medicine and helping people. I realized while I was in the college that it wasn't the best fit for me. I started taking business courses and felt like that is where I belonged. I liked everything I learned – especially the finance portion.



**Favorite hobbies:** I love being active. My wife and I go to a CrossFit gym every day and we love to run obstacle races like the Spartan Race or Tough Mudder. We have 3 scheduled this year! I like to snowboard, mountain bike, long board and wake board. I also like home projects and am currently involved in WAY TOO MANY!

**Favorite movie:** It is totally dependent on genre... Braveheart will always be high on my favorites list. I love movies so I probably have 100 "favorites"

**On weekends where will you most likely find me:** With my kids and pup playing outside! We like bike riding around the river together near the falls. I will also most likely be engaged in some project around the house. It seems that list just keeps getting longer and longer these days.

**Word that describes me:** I asked my wife this and her immediate response was... DORK! I guess she knows me best.

**What was the most adventurous thing you have ever done?** The fact that I am struggling with this question means I need more adventures... I went zip-lining in Mexico once and that was pretty adventurous. I've jumped off 70 ft. bridge into the ocean...

**If I could have a super power what would it be?** Flying? It'd make seeing customers so much easier.

**My favorite quote:** "Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma - which is living with the results of other people's thinking. Don't let the noise of other's opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary." – Steve Jobs

**What are you most proud of?** I am most proud of being a father. I love my kids so much and love seeing them grow and develop. They are turning into wonderful little people.

**Something most people do not know about you:** I come from a family of 6 kids! My mom also adopted 4 kids when I was in my 20's so our family has grown considerably. We currently have 8 grand kids in our family.





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Botanical Ingredients



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Treated Pigments



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Ingredients, and Natural Oil-based  
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Sarcosinate &  
Glutamate Surfactants



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