



STREAM2SEA

— Reef-Friendly • Biodegradable —

Press Kit



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Stream2Sea sets new standard for 'EcoConscious reef-safe' body care products

Three years ago -- long before Hawaii, Palau and Key West banned some sunscreen ingredients because they are lethal to coral reefs -- Stream2Sea made its debut, meeting criteria that hadn't even been set at the time. Autumn Blum was uniquely qualified for the challenge. As an award-winning cosmetic chemist and avid diver, she could see the results of traditional sunscreen and body care products on the reefs she loves.

Today, Stream2Sea is still the world's only line of sunscreens and body care products that have been third-party tested for their aquatic safety. All products in the Stream2Sea line have passed an extensive range of tests -- from microscopic *C. elegans* and freshwater fish to sensitive coral larva in the Florida Keys -- before formulations were finalized.

"There are a lot of products out there claiming to be reef-safe -- some are and some aren't because 'reef-safe' is not a government-regulated term," she said. "We're still the only company to have done the hard -- and expensive -- work to prove that our formulations are safe for marine creatures."

"This is really ground-breaking research," said Dr. Denise Flaherty, the biology professor at Eckerd College who led the first round of testing. "The first thing we did was an extensive literature search and discovered that there were very few rules on testing skincare products for aquatic toxicity."

The next series of tests focused on vulnerable coral larva collected at Mote Marine Laboratory's Tropical Research Station on Summerland Key under the direction of Dr. Koty Sharp. "For many years, we've been collaborating with Smithsonian Institution researchers to identify why coral larvae select one substrate or another -- and some of them are very picky," Sharp said. "We've learned that even a very low concentration of some chemicals can influence bacterial metabolism on these surfaces, and that bacterial communities on reefs directly impact the survival of coral larvae."

Researchers already knew that some sunscreen ingredients, particularly the often-used benzophenone2, or BP-2, are highly toxic to corals, but even ingredients considered to be safe can impact an aquatic ecosystem. "Our first formulations used ingredients that met Whole Foods Premium Body Care Standards, but they still killed tanks full of fish," Blum said.

And while aquatic toxicity is a particular concern to divers, fishermen and surfers, sunscreen ingredients are also important even for people who never enter the water. "Besides the known health risks to our own bodies, BP-2 isn't removed in a typical wastewater treatment plant so it eventually ends up in our coastal waters," Blum said. "Most people would never intentionally harm a coral reef, but we want people to really look at what they're using on their bodies, and how that affects the waters they play in and near. It can even affect waters far from them as well."

Formulated with powerful antioxidant blends to protect skin from sun damage, Stream2Sea products include sunscreens, sun and sting relief gel, conditioning shampoo and body wash, leave-in conditioner, nourishing body lotion and lip balms. Stream2Sea products are currently available online at www.Stream2Sea.com or ask for them at your favorite health food store, dive shop or outdoor retailer.



Our Ingredients

The nourishing ingredients found in our products were carefully selected to provide the most powerful protection for sun-damaged skin with antioxidants that combat free radical damage, minimize redness and reduce visible signs of dryness.

The non-greasy formulas also provide all-day moisture using potent botanical ingredients including:
Green Tea, Holy Basil, Aloe, Olive Leaf Extract, and Wakame



Ingredients for You, Your Family, & The Planet

Green Tea

Well-known for its benefits as a beverage. Used topically, green tea is a potent antioxidant that also helps to reduce redness.

Holy Basil

Also known as Tulsi, is a highly effective adaptogen (*a non-toxic substance used to increase the body's ability to resist the damaging effects of stress and restore or promote normal function*).

Holy basil has been used in skincare products for nearly 5,000 years. Recent research indicates that it may also reduce damage from the sun.

Aloe

One of the most well-known remedies for overexposure to the sun, it is cooling and soothing. Containing multiple antioxidants, it is also a nongreasy moisturizer that keeps skin hydrated.

Olive Leaf Extract

Packed with antioxidants and phytonutrients to protect against the oxidative stress that causes cellular damage.

We have chosen several ingredients that are biofermented to make them more easily absorbed and readily available. **Biofermented ingredients** also minimize damage at the cellular level, helping to counter some of the damage caused by overexposure to the sun.

Wakame Bioferment

Made from a species of seaweed, (*Undaria pinnatifida*), with properties that purify and fortify skin.

Olive Leaf Bioferment

Olive leaf bioferment isolates the unique antioxidants in olive leaves for more effective protection for sun-damaged and dry skin.

Non-nano Titanium Dioxide

The UV protector in all of our SPF products. We prefer the mineral sunscreens over any of the chemical sunscreens (avobenzone, octyl methoxycinnamate, etc). Most mineral-based sunscreens use zinc oxide or a combination of titanium and zinc. We have intentionally avoided zinc, as many zinc dispersions – even the natural ones – can be highly toxic to aquatic organisms.



Our Packaging

At Stream2Sea, we work hard to ensure that our products are safe not only for you and your family, but also for the sustainability of our planet.

To reduce our impact on the environment, we make sure that our packaging is as green and sustainable as the products themselves.

We don't like plastic either! That is why our tubes are made from sugarcane resins, our 32 oz bottles are made from recycled milk jugs, and our baggies are made with biodegradable and recyclable PLA film.



Together, We're Doing Better

All Stream2Sea products use sugarcane resin tubes or recycled milk jugs, except for our lip balms- we are actively working towards making their packaging more sustainable as well.

Please recycle and ask your other favorite brands to consider making the switch to sugarcane-based bio-packaging, recycled or biodegradable materials as well.

Sugarcane Resin Tubes: A Viable Option to Standard Plastic

You know how ethanol can be made from corn instead of petroleum? Well, now PET packaging can be made from sugarcane waste instead of petroleum-based fossil fuels! We chose to use sugarcane resin tubes as a viable alternative to traditional PET plastic tubes. They are made from the pulp after the sugar juices have been expelled. This pulp – *once treated as a waste product and burned* – can now be utilized as a valuable product which reduces our greenhouse emissions!

Like ethanol made from corn, the pulp is fermented and distilled. The ethanol is then dehydrated to create ethylene, which is then converted into polyethylene, a bio-based material. This material is identical to traditional petrochemical-based plastics - *except for the carbon footprint that went into making it!* The texture, durability, weight, appearance and shelf life are exactly the same.

Repurposing Milk Jugs

Stream2Sea's large 32-ounce bottles are made of plastic milk jugs and water bottles that would otherwise end up in a landfill, or our ocean. Every pound of our resins diverts approximately 10 milk jugs from America's waste stream and the world's oceans.

Biodegradable Bags

To meet the 'liquid requirements' and ship our products through Amazon, they need to be placed inside a 'plastic' baggie. We struggled with this, and finally sourced a 'Green Line' biodegradable, re-usable plastic bag.

We encourage reuse of this bag, then either recycle with other LDPE plastics or send to the landfill where it is proven to biodegrade.



Our Products

Our formulas are good for your body:

- Active, nutrient-rich antioxidant blend of organic Wakame, Green Tea, Tulsi, & Olive Leaf as the core of all our products.
- Healthy ingredients formulated to be in compliance with EcoCert and other natural standards
- Manufactured in the USA

Our formulas are good for the planet:

- Readily biodegradable in both fresh and salt water
- The only sunscreen that has been tested to be non-toxic to freshwater fish, saltwater fish, *C. elegans* and coral larvae



DID YOU KNOW?

Over 4,000 to 6,000 TONS of skin care products are estimated to enter the coral reefs each year from tourist activities alone. This number doesn't take into account the products entering our rivers, lakes and streams through run off, sewage, and more. We have allotted over 50% of our start-up costs to eco-lab testing so that we can state, with complete confidence, that we are an EcoConscious skin care line that is healthy for our bodies and for the waters of our planet.



Our formulas will never contain: Parabens, DEAs/MEAs/TEAs (diethanolamines / methanolamines/triethanolamines), SLS or SLES (sodium laurel or laureth sulfates), phthalates, dyes, cinnamates, benzophenones (BP-2), or camphor derivatives



Sunscreens

Tinted Sunscreen - SPF 20

- Water-resistant 80 minutes
- Broad Spectrum SPF 20



Drug Facts	
Active Ingredients	Purpose
6,6% Titanium Dioxide (Non-Nano)	Sunscreen
Uses ■ Helps prevent sunburn	
Inactive ingredients	
Deionized Water, Aqueous Extracts of Camellia Sinenis (Green Tea) Leaf*, Ocimum Teniflorum (Tulsi) Leaf*, Alaria Esiculenta (Wakame Seaweed)* and Olea Europa (Olive) Leaf*, Caprylic/Capric Triglyceride, Aloe Barbadensis (Aloe) Leaf Juice*, Cocoglycerides, Glycerin, Cetearyl Alcohol, Cetyl Palmitate, Polyhydroxysebacic Acid, Sorbitan Olivates, Cetearyl Olivates, Methylcellulose, Cocos Nucifera (Coconut) Oil*, Stearic Acid, Acrylates Copolymer, Magnesium Aluminum Silicate, Sorbitan Palmitate, Tocopherol, Xanthan Gum, Alumina, Benzyl Alcohol, Salicylic Acid, Sorbic Acid, Iron Oxides (CI 77492, CI 77491, CI 77499) and Jojoba Esters *ORGANIC INGREDIENTS	

SPFT2-3 - \$16.95



8 51061 00609 4

SPFT2-1 - \$7.50



8 51061 00619 3

SPFT3-32 - \$129



8 51061 00678 0

Tinted Sunscreen - SPF 30

- Water-resistant 80 minutes
- Broad Spectrum SPF 30



Drug Facts	
Active Ingredients	Purpose
8,8% Titanium Dioxide (Non-Nano)	Sunscreen
Uses ■ Helps prevent sunburn	
Inactive ingredients	
Deionized Water, Aqueous Extracts of Camellia Sinenis (Green Tea) Leaf*, Ocimum Teniflorum (Tulsi) Leaf*, Alaria Esiculenta (Wakame Seaweed)* and Olea Europa (Olive) Leaf*, Caprylic/Capric Triglyceride, Aloe Barbadensis (Aloe) Leaf Juice*, Cocoglycerides, Glycerin, Cetearyl Alcohol, Cetyl Palmitate, Polyhydroxysebacic Acid, Sorbitan Olivates, Cetearyl Olivates, Methylcellulose, Cocos Nucifera (Coconut) Oil*, Stearic Acid, Acrylates Copolymer, Magnesium Aluminum Silicate, Sorbitan Palmitate, Tocopherol, Xanthan Gum, Alumina, Benzyl Alcohol, Salicylic Acid, Sorbic Acid *ORGANIC INGREDIENTS	

SPFT3-3 - \$16.95



8 51061 00610 0

SPFT3-1 - \$7.50



8 51061 00620 9

SPFT3-32 - \$129



8 51061 00679 7

Sunscreen For Face and Body - SPF 20

- Water-resistant 80 minutes
- Broad Spectrum SPF 20



Drug Facts	
Active Ingredients	Purpose
6,6% Titanium Dioxide (Non-Nano)	Sunscreen
Uses ■ Helps prevent sunburn	
Inactive ingredients	
Deionized Water, Aqueous Extracts of Camellia Sinenis (Green Tea) Leaf*, Ocimum Teniflorum (Tulsi) Leaf*, Alaria Esiculenta (Wakame Seaweed)* and Olea Europa (Olive) Leaf*, Caprylic/Capric Triglyceride, Aloe Barbadensis (Aloe) Leaf Juice*, Cocoglycerides, Glycerin, Cetearyl Alcohol, Cetyl Palmitate, Polyhydroxysebacic Acid, Sorbitan Olivates, Cetearyl Olivates, Methylcellulose, Cocos Nucifera (Coconut) Oil*, Stearic Acid, Acrylates Copolymer, Magnesium Aluminum Silicate, Sorbitan Palmitate, Tocopherol, Xanthan Gum, Alumina, Benzyl Alcohol, Salicylic Acid, Sorbic Acid *ORGANIC INGREDIENTS	

SPF2-3 - \$16.95



8 51061 00608 7

SPF2-1 - \$6.95



8 51061 00618 6

SPF3-32 - \$99



8 51061 00677 3

Sunscreen - SPF 30

- Water-resistant 80 minutes
- Broad Spectrum SPF 30



Drug Facts	
Active Ingredients	Purpose
8,8% Titanium Dioxide (Non-Nano)	Sunscreen
Uses ■ Helps prevent sunburn	
Inactive ingredients	
Deionized Water, Aqueous Extracts of Camellia Sinenis (Green Tea) Leaf*, Ocimum Teniflorum (Tulsi) Leaf*, Alaria Esiculenta (Wakame Seaweed)* and Olea Europa (Olive) Leaf*, Caprylic/Capric Triglyceride, Aloe Barbadensis (Aloe) Leaf Juice*, Cocoglycerides, Glycerin, Cetearyl Alcohol, Cetyl Palmitate, Polyhydroxysebacic Acid, Sorbitan Olivates, Cetearyl Olivates, Methylcellulose, Cocos Nucifera (Coconut) Oil*, Stearic Acid, Acrylates Copolymer, Magnesium Aluminum Silicate, Sorbitan Palmitate, Tocopherol, Xanthan Gum, Alumina, Benzyl Alcohol, Salicylic Acid, Sorbic Acid *ORGANIC INGREDIENTS	

SPF3-3 - \$16.95



8 51061 00607 0

SPF3-1 - \$6.95



8 51061 00617 9

SPF3-32 - \$99



8 51061 00676 6



Body and Skin Care

Nourishing Body Lotion

- Light, non-greasy formula for all day moisture.
- Reduces visible signs of dry and sun-damaged skin.



Ingredients: Aqueous Extracts of Camellia Sinensis (Green Tea) Leaf*, Ocimum Tenuiflorum (Tulsi) Leaf*, Alaria Esculenta (Wakame Seaweed)* and Olea Europaea (Olive) Leaf*, Aloe Barbadensis (Aloe) Leaf Juice*, Cocos Nucifera (Coconut) Oil, Helianthus Annuus (Sunflower) Seed Oil, Glycerin, Cetearyl Olivat, Sorbitan Olivat, Jojoba Esters, Butyrospermum Parkii (Shea Butter) Fruit, Olive Squalene, Caprylic/Capric Triglycerides, Cetearyl Alcohol, Cetyl Palmitate, Sorbitan Palmitate, Sorbitan Olivat, Undaria Pinnatifida (Wakame Seaweed) Bioferment, Lactobacillus/Olea Europaea (Olive) Leaf Ferment, Tocopherol, Panthenol, Xanthan Gum, Fragrance (Naturally Derived), Benzyl Alcohol, Salicylic Acid, Sorbic Acid

NBLO - 6 - \$12.95



NBLO-32 - \$39.00



NBLO - 1 - \$3.95



Conditioning Shampoo & Bodywash

- Convenient 3-in-1 product is perfect for travelling.
- Keratin and Panthenol helps prevent hair breakage



Ingredients: Aqueous Extracts of Camellia Sinensis (Green Tea) Leaf*, Ocimum Tenuiflorum (Tulsi) Leaf*, Alaria Esculenta (Wakame Seaweed)* and Olea Europaea (Olive) Leaf*, Aloe Barbadensis (Aloe) Leaf Juice*, Coco Glucoside, Lauryl Glucoside, Sodium Lauryl Methyl Isethionate, Glycerin, Coconut Oil Polyglyceryl-6 Esters, Cocamidopropyl Betaine, Sodium Cocoyl Isethionate, Polysorbate 80, Cocamidonium Hydrolyzed Keratin, Gluconolactone, Undaria Pinnatifida (Wakame Seaweed) Bioferment, Lactobacillus/Olea europaea (Olive) Leaf Ferment, Hydrolyzed Keratin Protein, Cinnamidopropyltrimonium Chloride, Panthenol, Hydroxypropyl Guar Hydroxytrimonium Chloride, Potassium Sorbate, Sodium Methyl Oleoyl Taurate, Sodium Benzoate, Fragrance (Naturally derived)

COSH-6 - \$12.95



COSH-32 - \$39.00



COSH-1 - \$3.95



Soothing Lip Balm

- Aloe and Calendula provide soothing relief to dry or sun-kissed lips



Ingredients: Sunflower Oil*, Beeswax*, Cocoa Butter*, Coconut Oil*, Cucumber Flavor*, Aloe Vera Oil*, Vitamin E, Matcha Green Tea*, Extracts of Calendula*, Green Tea*, Tulsi*, Wakame Seaweed* and Olive Leaf*

SOLB - \$6.95



Sun & Sting Relief Gel

- Blend of essential oils and enzymes quickly cools skin.
- Greaseless, fast-absorbing gel formula



Ingredients: Aqueous Extracts of Camellia Sinensis (Green Tea) Leaf*, Ocimum Tenuiflorum (Tulsi) Leaf*, Alaria Esculenta (Wakame Seaweed)* and Olea Europaea (Olive) Leaf*, Aloe Barbadensis (Aloe) Leaf Juice*, Deionized Water, Glycerin, Methyl Gluceth 10, Gluconolactone, Alaria Esculenta (Wakame Seaweed) Bioferment, Lactobacillus/Olea Europaea (Olive) Leaf Ferment, Papain, Bromelain, Hydrolyzed Glycosaminoglycans, Hydrolyzed Guar, Lavandula Angustifolia (Lavender) Oil, Mentha Piperita (Peppermint) Leaf Oil, Cinnamomum Zeylanicum (Cinnamon) Bark Oil, Melaleuca Alternifolia (Tea Tree) Leaf Oil, Eucalyptus Globulus Leaf Oil, Acetic Acid (Vinegar), Xanthan Gum, Hydroxypropyl Guar, Sodium Benzoate, Potassium Sorbate

SUSG-6 - \$12.95



SUSG-32 - \$39.00



SUSG-1 - \$3.95



Leave-In Conditioner

- Detangles, leaving hair soft and manageable.
- Protects color and reduces fading.



Ingredients: Aqueous Extracts of Camellia Sinensis (Green Tea) Leaf*, Ocimum Tenuiflorum (Tulsi) Leaf*, Alaria Esculenta (Wakame Seaweed)* and Olea Europaea (Olive) Leaf*, Aloe Barbadensis (Aloe) Leaf Juice*, Cetearyl Alcohol, Behentrimonium Chloride, Glycerin, Dimethylsiloxane, Hydrogenated Vegetable Oil, Cocamidonium Hydrolyzed Keratin, Gluconolactone, Caprylic/Capric Triglycerides, Cinnamidopropyltrimonium Chloride, Undaria Pinnatifida (Wakame Seaweed) Bioferment, Lactobacillus/Olea europaea (Olive) Leaf Ferment, Hydrolyzed Keratin Protein, Tocopherols, Panthenol, Fragrance (Naturally Derived), Sodium Benzoate

LICO - 6 - \$12.95



COSH-32 - \$39.00



LICO - 1 - \$3.95



Sun Protect Cherry Lip Balm - SPF 30

- Broad-spectrum SPF 30 Protection for your lips



Active Ingredients: Zinc Oxide 12% (Non-Nano), Titanium 1% (Non-Nano)

Inactive Ingredients: Persea Gratissima (Avocado) Oil*, Beeswax*, Calendula Officinalis Flower Extract*, Ricinus Communis (Castor) Seed Oil*, Cherry Flavor*, Theobroma Cacao (Cocoa) Seed Butter*, Cocos Nucifera (Coconut) Oil*, Camellia Sinensis (Green Tea) Leaf*, Ocimum Tenuiflorum (Tulsi) Leaf*, Alaria Esculenta (Wakame Seaweed)* and Olea Europaea (Olive) Leaf*, Mixed Tocopherols, Hippophae Rhamnoides (Sea Buckthorn) Oil*, Eupatorium Rebaudianum Berton (Shiwa) Leaf Extract*, Calophyllum Tocamahaca Seed (Tamanu) Oil*

CHLB - \$6.95





Ingredients to Avoid

At Stream2Sea, we are committed to creating products that are safe for people and the planet. Some ingredients, while safe for people, are toxic in an aquatic ecosystem. Others should **never** be used – but there are so few federal regulations defining “safe” that ingredients proven to be harmful to coral reefs and other marine life can pass the current “reef safe”, “natural” and “green” standards.

Here are some ingredients EcoConscious consumers should watch for and avoid:

Benzophenone-3 (Oxybenzone)

A common ingredient in FDA-approved sunscreens, oxybenzone is very effective at reducing UV exposure – but it is also classified as a hazardous irritant for eye contact and slightly hazardous for direct skin contact. According to the Center for Disease Control (CDC), 97% of Americans have this chemical circulating in our bodies. It is also listed as a direct cause of **coral bleaching**.

Avobenzone

A common ingredient in FDA approved chemical-based sunscreens, this ingredient is often used to replace Oxybenzone. Avobenzone is still a benzophenone and holds with it similar risks associated with Oxybenzone. It penetrates the skin and is also used to help other chemicals penetrate the skin. It photodegrades with exposure to sunlight, increasing free radicals in the skin, increasing risks of types of skin cancer as well as contact allergies to sunscreens.

Cyclopentasiloxane / Cyclomethicone

Silicone-based ingredients that are used in skin and hair care products, they soften the skin and smooth hair follicles, but they’ve also been shown to be toxic and to bio-accumulate in aquatic organisms. They are also suspected to be reproductive toxins and endocrine disruptors in humans

Formaldehyde and products that release Formaldehyde

Including Diazolidinyl Urea, Quaternium-15, DMDM Hydantoin and Hydroxymethylglycinate
Many of the preservatives that replace parabens release formaldehyde! The International Agency for Research on Cancer has classified formaldehyde as a human carcinogen. It is also an ecotoxin.

Homosalate

Another common sunscreen ingredient with strict FDA limits for use, it is a UV-absorber that helps sunscreen ingredients penetrate your skin. It bioaccumulates in the body faster than it can be eliminated and is considered a hormone disrupter.

Methylisothiazolinone

A widely used and very effective preservative, methylisothiazolinone is considered a sensitizer and irritant that may cause allergic reactions. Recent studies suggest that it may be a neurotoxin, and it is toxic in aquatic ecosystems

Nanoparticles

Although zinc and titanium are natural materials, nanoparticles of common minerals are insoluble and bio-persistent. Their tiny size – up to 100,000 times smaller than a human hair – means they can react differently than natural substances. A recent study has shown that zinc oxide nanoparticles, even in extremely low concentrations, caused significant developmental disorders in sea life.

Octocrylene

A synthetic UV absorber and SPF booster, this may cause allergic reactions in sensitive skin and has been shown to bio-accumulate in the body.

Octinoxate / Octyl Methoxycinnamate

Commonly used UV filters, octinoxate and octyl methoxycinnamate are absorbed through the skin. They have been found in human urine, blood and breast milk, where they become endocrine disruptors. They are also indicated as a direct cause of coral bleaching.



Ingredients to Avoid

Parabens

Parabens including propyl paraben, benzyl paraben, methyl paraben and butyl paraben, are used to prevent the growth of bacteria, yeast and molds in personal care products. They mimic hormones, including estrogen which has been shown to contribute to breast cancer. They are also listed as a direct cause of coral bleaching.

Phthalates

Commonly found in synthetic fragrances, phthalates block male hormones and can interfere with normal genitalia development. High levels can cause sluggish sperm and low testosterone levels in adult males. They are classified as endocrine disruptors that can interfere with normal brain function. You will not see phthalates listed on an ingredient label, but they are often hidden in **fragrances**. Look for fragrances that are designated as 'natural' or derived from essential oils. Some may be labeled as 'phthalate-free.'

Retinyl Palmitate

Often found in cosmetics and skin care products, retinyl palmitate breaks down and produces free radicals that damage skin. Additionally, the FDA has raised concern that regular applications of vitamin A creams may bio-accumulate and become toxic to a developing fetus

Sodium Lauryl & Laureth Sulfate (SLS/SLES)

Sodium lauryl and laureth sulfate are surfactants, detergents and emulsifiers that create lather in shampoos and body washes. Although SLS is 'derived from coconuts, nearly 16,000 studies in the PubMed science library question the safety of the resulting molecule. Although suppliers maintain that actual health risk varies based on the level of exposure to the ingredient, it is believed that it is the gradual, long-term exposure that causes the most damage. SLS is also listed as 'toxic to aquatic organisms.'

Zinc Oxide

Zinc is found naturally in the environment and in seawater but not all zinc is created equal. Uncoated, non-nano zinc, appears to pose no threats; but those promoted as 'clear' or 'transparent' – including the allnatural versions – often have ingredients known to be highly toxic to aquatic organisms.

We are committed to creating products that are safe for people and the planet.



Ingredients to Avoid Wallet Card

Keep our Stream2Sea Ingredients to Avoid card made from BioPlastic in your wallet or travel case to remind you of potential health and eco hazards.

Order yours on Stream2Sea.com!



Our Story

At the heart of each member of the Stream2Sea team is an obsessive drive for discovery. Scuba diving, kayaking, swimming, hiking, camping, skiing...these are all a necessary part of our regular day-to-day living. We just happen to be cosmetic chemists and environmentalists, too.

We have carefully considered the ingredients commonly used to make skincare products, while taking into account the effects they can have on our bodies and on our planet. We realized we could do better and create EcoConscious skincare products. **So we did.**

The chemist, the environmentalist and the explorer came together to create an ecoconscious sun and skin care line that is healthy for our bodies and not harmful for the waters of our planet.



Together, we are doing better!

What the cosmetic chemist said...

Biodegradability, aquatic toxicity and healthy attributes: these three concerns are hard to balance in any skin care product, especially when you consider the wide range of preservatives, additives and chemicals that are approved for use by the FDA despite having been deemed harmful to either the body or the planet. We have developed our formulas by consciously choosing each ingredient for its efficacy, integrity and non-harming influences.

What the environmentalist said...

Fact: The National Oceanic and Atmospheric Administration (NOAA) states that **4,000 to 5,000** tons of sunscreen enters our coral reefs annually from tourist activities alone. This number doesn't take into account the products entering our rivers, lakes and streams through stormwater and wastewater. While some brands in the market today claim to be "reef safe" and "ocean friendly," many contain ingredients that are known to harm the fragile ecosystems and marine life of our waters.

We have allotted a significant portion of our start-up costs to in-depth testing at independent laboratories so that we can state, with complete confidence, that we are the safest product on the market.

What the explorer said...

We have the ability to make educated decisions about the products we use to protect and care for our bodies. You shouldn't have to be a chemist or environmentalist to know what ingredients are used or how those ingredients may impact our body or waters. You have a right not to be misguided by false advertising either. Stream2Sea has chosen to be totally transparent in our journey to bring our products to you. We want our customers to understand exactly what they're using and to also have the knowledge to help educate other explorers as well.



Autumn Blum

Ocean Advocate, Entrepreneur, Cosmetic Chemist
Founder and Formulator of Stream2Sea, LLC

“We’re all responsible for what happens in our world. If we want to play in the water, we need to know how our choices in skin care products can affect our oceans, lakes, rivers and streams.”



Autumn holds a B.Sc. in chemistry with a concentration in environmental geology from Eckerd College in St. Petersburg, Florida. A cosmetic chemist, herbalist and entrepreneur focusing on natural product formulations for more than 15 years, Autumn is an active member of the Society of Cosmetic Chemists and the American Botanical Council.

Her formulations have won multiple awards including Best of Natural Beauty from Better Nutrition, Best of Show from Natural Products Expo, Delicious Living’s Beauty & Body and Taste for Life Essentials.

Triple-bottom line may be a relatively new business term, but it’s been a lifelong passion for Autumn. Formulating products that contribute first to people and the planet, and then to profit, has been her bottom line for her entire career.

Growing up in Sarasota, Florida, Autumn has always been passionate about the outdoors. She became a NAUI certified diver at 14, and spent her youth diving, backpacking the Appalachian Trail and kayaking the Peace River. She’s also a technical diver, shark advocate, underwater photographer and SCUBA Instructor.

“This journey began on a liveaboard trip to explore one of the most beautiful reefs in the world. I watched, with increasing frustration, as the divers and crew bathed on deck after every dive - the soap, sunscreen and conditioner residues washing right overboard into these pristine waters. I watched as the divers and crew reapplied sunscreens, then shortly after, dove back in to repeat the process. As a cosmetic chemist, I understood that many of the ingredients used in these products could be highly toxic to our fragile aquatic ecosystem. Understanding the adverse and long-term effects they could have on the coral reefs, I thought... we can do better!”



Contact Autumn

Autumn Blum

Founder and Formulator

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866-960-9513

Follow Autumn’s blog at:
www.Stream2Sea.com/journey



Our Water

If the world's freshwater supply could fill a single bathtub, the amount readily accessible to humanity would fill a thimble. It doesn't seem like much. Yet even this little thimbleful of water is enough to sustain all life on our planet.

Fresh waters naturally contain elements like calcium, magnesium, sodium, potassium, carbon, chlorine, and sulfur—as well as plant nutrients such as nitrogen, silicon, and phosphorus. Matter breaks down naturally into these elements and keeps a healthy balance. But when we introduce foreign ingredients like those found in personal care products, particularly sunscreens, the balance is quickly disrupted. These ingredients may cause physiological changes in aquatic organisms and may become lethal at even low concentrations.



For most people, water supply is determined by a local government agency. Customers of those suppliers expect to turn on their faucets or spigots and receive a fresh supply of readily available water. Most people give little thought to the quality of the water, although recent events are building greater awareness. Despite this, if it is relatively odor-free and clear, consumers will assume it is clean and safe for use.

Fewer people realize that in most cases, in a city or large area township, water that is piped into homes is being piped in from a water treatment facility. The purpose of a water treatment facility is to clean and treat the water collected from sewers, run-offs, spill-ways and gutter systems. It is routed to the facility, where the water is then filtered several times through various industry-standard methods. These methods start out with larger grids to separate visible debris. The water passes from one tank to another, using finer methods of filtration to purify the water.

For many years sludge, sand and charcoal were used as the final end-stage for purification, before the water was released on the opposite side of the water treatment facility and routed back into the city or town for household use and drinking water. These methods were considered highly effective and yielded water which could test above 98% pure.

With the development of more chemicals for use in personal care products, pharmaceutical production and chemical production facilities, -- as well as more sophisticated methods of measuring contaminants -- , scientists and the engineering industry developed acronyms of "CECs," (Contaminants of Emerging Concern) and "PPCPs," (Pharmaceutical and Person Care Products) in water treatment facilities to denote the levels of chemicals, and water run-offs that were testing positive for these pollutants, which may pose serious health risks for all living creatures.



Our Water

As the engineering field advances in an attempt to catchup with CECs, newer methods of filtration are introduced such as microfiltration and ultrafiltration followed by reverse osmosis and/or nanofiltration, UV disinfection, biological treatment, and ion exchange. Considered complementary methods to the traditional filtration practices are membrane filtration, reverse osmosis and activated carbon. Further filtration methods being utilized are membrane bioreactor (MBR) technology, ozonation, and advanced oxidation processes.

While many of these methods yield better purity results to be cleared of many CECs and PPCPs, most of them are not required, nor are they industry standard. The EPA acknowledges that CECs and PPCPs exist in our potable water systems, but we have yet to establish set methods for eliminating them, rendering those waters pure for consumption and use.

We have power in our buying decisions. It's one small step each of us can make towards inciting governing bodies to push formulators and manufacturers for higher standards in ingredients, be more thorough in testing and research and finally to be more responsible in managing our precious and limited resources.

Certain ingredients commonly used in sunscreens, cosmetics, and soaps are highly toxic to corals and marine life. These include benzophenones, oxybenzone, octinoxate and parabens – as well as coatings used on zinc oxide to reduce whitening. When these chemicals are introduced to our waters, the coral can get sick and expel their life-giving algae. Without these algae, the coral can “bleach” (turn white) and may even die. This, in turn, affects thousands of species of fish who rely on the coral reefs. When these populations decline, it quickly affects us. True, the ocean is pretty darn big – and some may think “My body is just one drop in the big bucket.” But our combined drops can fill that bucket and when one person chooses to be reef-safe and ocean-friendly, they have the opportunity to share their choice with others.

Eventually, good changes can happen and a difference will be made.

96%

of water is in
our oceans

25%

of all marine
life depend on
coral reefs for
their survival

1%

of the ocean
floor is covered
in coral reefs

60%

of coral reefs
are at risk from
human impact



Coral and Marine Safety Testing

Just because a sunscreen is biodegradable does **not** mean it is safe for aquatic ecosystems, particularly if it contains oxybenzone, octyl methoxycinnamate and other harsh ingredients. Biodegradability for sunscreen means that the product will eventually break down within 28-60 days. Sometimes, ingredients like oxybenzone break down into components that are even more harmful than the original compound, and we question what kind of damage can be done to the environment or our bodies during that time.

It is important to know that just because a product, sunscreen or other, is biodegradable does not mean that it is non-toxic. There are several tests to measure a product's biodegradability, and most are designed to analyze the product's ability to breakdown in wastewater treatment facilities. To be considered 'readily biodegradable' the product must break down into its natural state from **60-80%** in **28 days**. 'Inherently biodegradable' means it will break down from as low as **20% to 60%** in that time period. So if a product says it is 'biodegradable' that is a good first step to knowing that the company is looking at its product's environmental breakdown.

However, it's important to understand that you cannot measure a product's safety just by looking at its ability to biodegrade. Nor, however, does the average test for biodegradability take place in waters you would like to swim in. Concentrated microorganisms and extremely high levels of oxygen contribute significantly to the speed at which any substance biodegrades. It was important for us to know that our products would, in fact, biodegrade in their natural environments, so we tested in both freshwater, as well as salt water.

The bottom line is to know your ingredients! Just because a sunscreen says that it is 'natural', 'reef safe', or even 'readily biodegradable', does not mean that it is truly safe. Turn the bottle over and check out the 'active' and 'inactive' ingredients.

Analytical Report Page 1 of 7

Report To:
Stream 2 Sea
Attn: Autumn Blum

Date Collected: 03/03/2015
Date Received: 03/04/2015

OCDE/OECD 306 "Biodegradability in Seawater"

% Degradation after (n) days (mg/l)

* Sunscreens were analyzed with Titanium Dioxide concentration subtracted

ALL FORMULAS ARE CONFIRMED TO BE BIODEGRADABLE IN SEAWATER

Products	7	14	28
SPF 30	100%	--	--
SPF 20	100%	--	--
Sun Protect Lip Balm	100%	--	--
After Sun Lip Balm	34%	100%	--
Soothing Body Lotion	30%	92%	100%
After Sun & Sting Gel	43%	58%	100%
Conditioning Shampoo	24%	41%	100%
Leave-In Conditioner	12%	45%	99+%

Analytical Report Page 1 of 7

Report To:
Stream 2 Sea
Attn: Autumn Blum

Date Collected: 03/03/2015
Date Received: 03/04/2015

OCDE/OECD 301D "Biodegradability in Fresh Water"

% Degradation after (n) days (mg/l)

* Sunscreens were analyzed with Titanium Dioxide concentration subtracted

ALL FORMULAS ARE CONFIRMED TO BE READILY BIODEGRADABLE IN FRESH WATER

Products	7	14	28
SPF 30	100% *	--	--
SPF 20	74%	100%	--
Sun Protect Lip Balm	100% *	--	--
After Sun Lip Balm	99%	100%	--
Soothing Body Lotion	100%	--	--
After Sun & Sting Gel	37%	49%	96+%
Conditioning Shampoo	100%	--	--
Leave-In Conditioner	49%	53%	100%



Coral and Marine Safety Testing

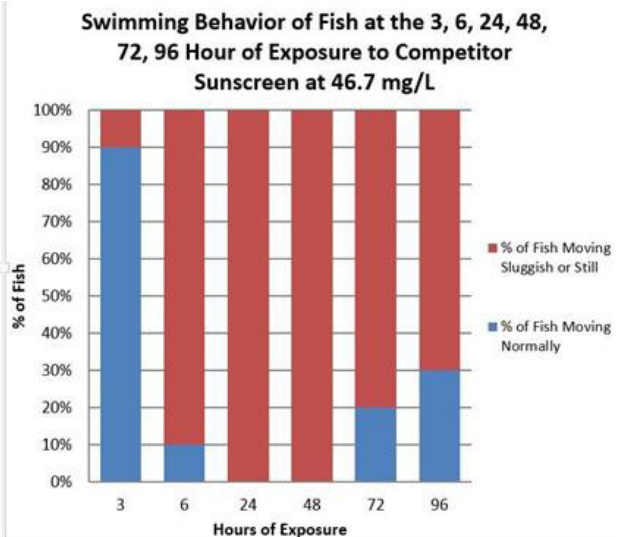
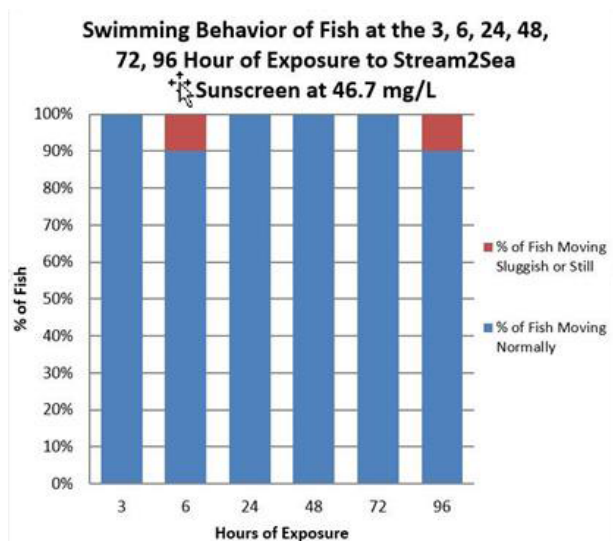
Aquatic Toxicity and Safety

We began by testing on *C. Elegans*, simple nematodes, which are ideal for rapid, predictive screening on inflammatory ingredients. We then moved on to freshwater and saltwater fish species, looking at the impact on the fish's eating behavior, swimming behavior and, of course, mortality rates. Our studies were prepared and conducted by the EcoTox team at Eckerd College. The test subjects were fed at the same time every day and the same amount of food for 96 hours. The fish were exposed to the highest concentration of product that any marine animal or plant would ever naturally come into contact with. For each test, we added a competitor's product to one group of subjects. The second group was exposed to the same concentration of Stream2Sea's biodegradable matching product. Finally, the control group was not exposed to any foreign products. During every observation period, mortality rate, feeding behavior and swimming behavior was recorded. These experiments were done for each of our products before determining their safety.

We were pleased to note that our products did not generate any mortality.

Swimming Behavior in Fish

These results show is that swimming behavior with Stream2Sea biodegradable mineral sunscreen is relatively unaffected, whereas the competitor sunscreen most definitely altered the fish's swimming behavior. Baitfish may be sluggish in the water and not as responsive to their environment. In the wild, sluggish fish would be more vulnerable to predators, and less likely to find or compete for food.





Coral and Marine Safety Testing

Feeding Behavior

These testing results reported by Dr. Denise Boyce Flaherty, the Assistant Professor of Biology of Eckerd College, indicated that feeding behavior with Stream2Sea sunscreen is relatively unaffected, whereas the competitor sunscreen most definitely altered the fish's desire to feed.

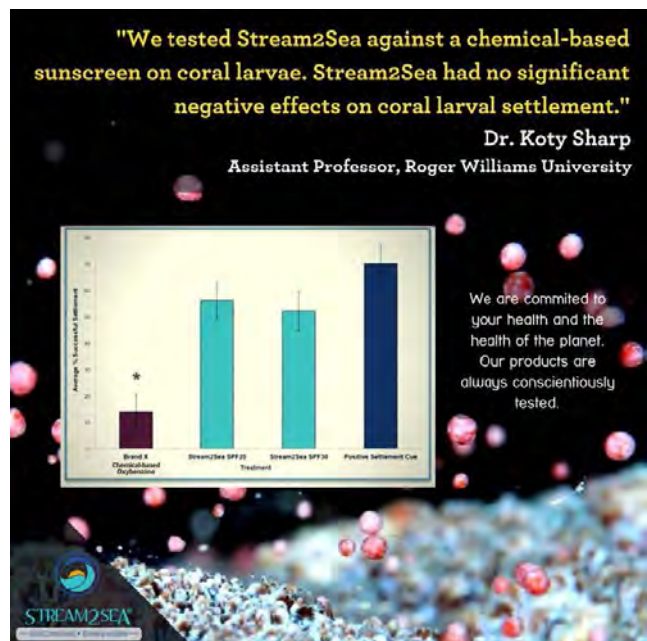
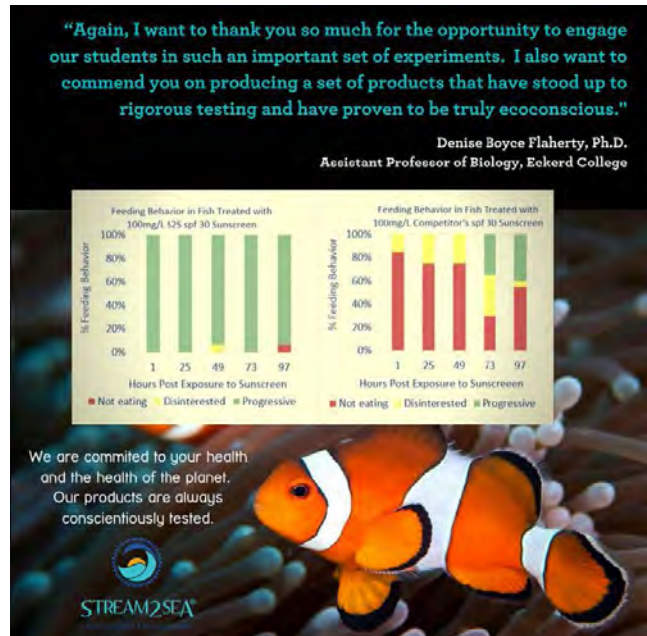
Coral Larvae Settlement Tests

Stream2Sea biodegradable mineral sunscreens (SPF 20 and 30) did not significantly decrease larval settlement, compared to the positive settlement control. The equivalent concentration of Brand X showed a significant negative settlement goal for larva exposed in the same situations.

Tests Summary of Biodegradable Sunscreens and Products

We set out to create the safest product line of biodegradable sunscreens and body care possible for us and the environment. Our company is led by a vegetarian and an animal rights activist, yet we realized that the only way to determine if our products would be harmful to fish and other aquatic life was to conscientiously and humanely test them on living animals.

We are very proud of the reef-safe and ecoconscious products we have created.





Does Sunscreen Cause Coral Bleaching?

Some of us wonder if protecting our bodies from the sun comes at the expense of serious and easily preventable environmental damage. When vibrantly colored coral turns white due to environmental stresses, it is called **coral bleaching**. It is occurring more frequently in areas that are often visited by tourists.

Coral can survive a bleaching event, if it is not too severe. If stress continues, the coral will not survive.

Microscopic algae live in coral tissue, giving coral its beautiful vibrant color. This algae is also the coral's primary food source. When environmental conditions change, such as temperature fluctuations, exposure to sunlight, air or exposure to pollutants including those found in chemical sunscreens, the algae leaves the coral, which weakens and makes it more vulnerable to disease.

Coral bleaching is rapidly becoming a catastrophic challenge for our oceans. According to the National Oceanic and Atmospheric Administration (NOAA), over the course of 2005, the U.S. lost **half of its coral** in the Caribbean. While several factors result in coral bleaching such as ocean warming, the chemicals found in personal care and household products have been found to cause an impact. Some of these chemicals are easily avoidable for consumers. While we may not be able to control ocean warming events, by choosing products which do not contain damaging chemicals, we are making a contribution to positive change. According to the National Park Service, **4,000 to 6,000 tons** of sunscreen enters the reef system annually from tourist activity alone.

Benzophenones Can Be Toxic“

Researchers have discovered that chemicals known as benzophenones and methoxycinnamates are highly toxic to corals and possibly other organisms found in the marine environment even in very low concentrations. So low, in fact, that one U.S. researcher has seen lethal impacts at concentrations of 62 billion parts per water – that's equal to one drop in 6 Olympic-sized swimming pool. These chemicals are not usually removed from wastewater in treatment facilities and typically end up being released directly into the nearest body of water, where they eventually reach the coast. BP-2 is commonly used in cosmetic products such as soaps, shampoos, body fragrances, and also sunscreens. Look for it on labels and avoid these products, whether you are playing in the water or not! So, what can you do to be more EcoConscious and reef friendly? Be aware of the ingredients in the products you use. Visit www.stream2sea.com/ingredients-to-avoid to see our list of ingredients we avoid. Use sunscreens that contain mineral-based active ingredients, not chemicals.

We prefer titanium dioxide, but uncoated zinc oxide is also ok.

**To learn more about this issue,
check out the following websites:**

- www.alertdiver.com/Sunscreen-Pollution
- www.stream2sea.com/wp-content/uploads/2016/08/Sources-Nauai-Green-Diver-2nd-quarter-2016.pdf
- www.pubs.acs.org/doi/abs/10.1021/es00032a001
- www.oceanservice.noaa.gov/facts/coral_bleach.html
- www.cdhe.noaa.gov/_docs/Site%20Bulletin_Sunscreen_final.pdf
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- www.tau.ac.il/lifesci/departments/zoology/members/loya/documents/Ecotoxicology.pdf