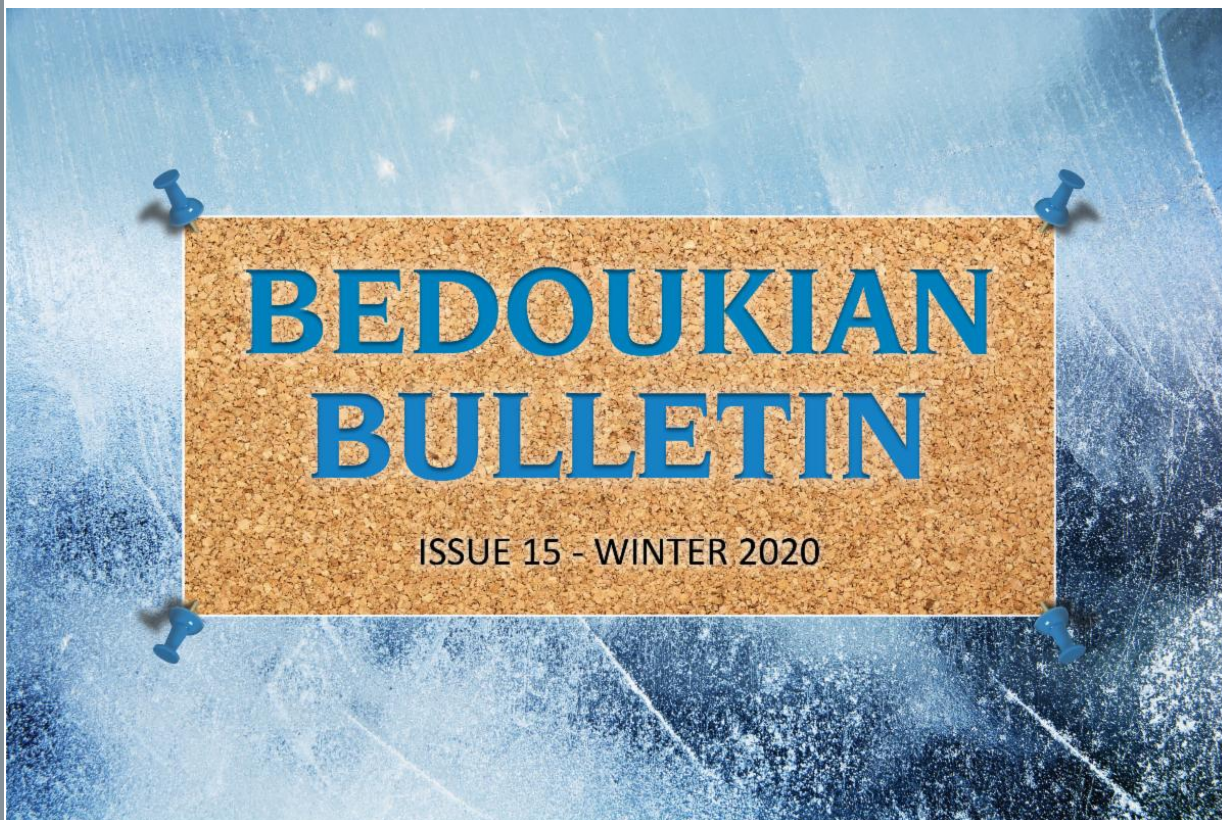


This issue of the Bedoukian Bulletin features four of Bedoukian's Specialty Ingredients: Dihydro Alpha Ionone, Vanillin & Ethyl Vanillin Propylene Glycol Acetal, and 1,3,5-Undecatriene FCC.



Fresh Winter Warmth Collection

Health and wellness have become a lifestyle and consumers continue to seek better-for-you foods and beverages. According to a 2018 Innova Market Insights Consumer Lifestyles Survey, eight in 10 consumers in the UK, U.S., China, Brazil, France and Germany have changed their own or their family's diets to try to be healthier, with over 40% of those consumers increasing consumption of fruits and vegetables. Incorporating more green vegetables and plant-based products into individuals' diets is going mainstream. For time-crunched consumers, brands are launching easy to prepare veggie forward dishes. Berries of all kinds are popular year-round and for the winter season, raspberries and dark berries are on trend in fragranced and flavored products. Vanilla is a staple and an expected ingredient in fragrances and flavors. As consumers begin to get cozy for the season, warm and comforting vanilla continues to appear in consumer-packaged goods. Inspired by the season, Bedoukian introduces the [Fresh Winter Warmth Collection](#). This collection explores fruity raspberry and dark berries, warm vanilla and toasty marshmallow, and fresh green directions, featuring a selection of Bedoukian ingredients that can be used in a range of formulations.

Fruity Raspberry & Dark Berries

Berries of all kinds are popular year-round and have a healthy halo because of their nutritional and healthful properties. According to IRI, 83% of U.S. households purchase berries and for the last five years they have been a consistently fast-growing category. Raspberry is an on-trend flavor appearing in beverages, candy, desserts and ice cream.



The Coca-Cola Company has been busy with new innovations in the pipeline. In December, **Smartwater** introduced four still flavors, which are lightly infused with natural fruit and herbal flavors. **Strawberry Blackberry** is one of the four flavors. In 2020, Coca-Cola will unveil various beverages with a berry profile such as **Minute Maid Blue Raspberry**, **Peace Tea Razzleberry Zer-OH** and **Simply Tea with Raspberry**. **MATI Energy** launched its self-titled craft-brewed organic energy drinks line in three varieties and **Raspberry Mint** is one flavor. **Rebbl** has extended its line with **Sparkling Prebiotic Tonics** formulated to support digestive health in four varieties. **Forest Berry** highlights elderberry, blueberry, bergamot and craft-brewed Fair Trade Assam black tea. **Heywell** launched its first RTD sparkling beverage line in three varieties and the **Calm + Reset** features **Blackberry and Ginger**.

Twelv 31 Spirits released **Twelv 31 Velvet Berry**, a white rum and vodka blended liqueur with "exotic berry essences and hints of tropical citrus notes." **Brizzy Seltzer Cocktails** is a new line of 5% ABV hard seltzers in four interesting flavor combinations: **Blood Orange Mimosa**, **Mixed Berry Mojito**, **Strawberry Rose** and **Watermelon Mule**.

On the indulgent side, raspberry is an on-trend flavor in candy and raspberry and chocolate combinations are popular in ice cream and desserts.

Extra Gum added the **Berry Mix** to the **Extra Refreshers** soft-chew product portfolio.

In the fragrance arena, an assortment of dark berries is utilized in fine fragrance, personal care and air care formulas.

Night is a new fragrance by **Bath & Body Works** and highlights a blend of dark berries, midnight jasmine and rich amber. **Burberry** added **Burberry Her Intense** to its collection. The new oriental gourmand is "dark and fruity...intensified with notes of blackberry, intoxicating jasmine and warm benzoin." **Britney Spears Prerogative Rave** is the entertainer's 27th fragrance. This floral fruity scent has notes of mandarin, Williams pear, raspberry, red calla lily, freesia, jasmine, sandalwood, cedar, cashmeran and musk. Similarly, **Jennifer Lopez's** new perfume **Promise** is a floral woody with topnotes of Italian tangerine, pink berries and Nashi pear blended with a floral heart of orris, jasmine sambac and honeysuckle and a drydown of woody notes and crystallized amber. **Kate Spade Live Colorfully Luxe** combines pimento berries and orris with leather, ambergris, vanilla and musk.

For the winter season, **Ulta** introduced the **Frosted Berry** collection in six applications such as body wash, body lotion, hand wash and foaming hand wash. In addition, Ulta offers the **Sweet & Shimmer Berry Pretty** collection in lip scrub, lip balm, bubble bath and hand lotion. For the season, **Method** introduced **Hollyberry** in dish soap, gel hand wash and foaming hand wash. **Eos Bright Cherry Blossom** "contains notes of cherry blossom petals, juicy black cherries and creamy sandalwood" and is packaged in a holiday gift set with Shea lip balm,

Bazooka Candy's newest **Baby Bottle Pop** is **Unicorn Glitter Berry**. The multicolored lollipop is designed to dip into the glittery candy powder made of bright rainbow specks with a sweet red berry-flavor. It is rumored that **Sonic** may be launching a **Redberry Sour Patch Kids Slush** with a Sour Patch Kids Redberry-flavored syrup mixed with Sour Patch Kids candy.

BuzzFeed's Tasty limited-edition **White Chocolate Raspberry Lava Cake** ice cream highlights white chocolate flavored ice cream, swirls of raspberry and chunks of cake. Similarly, for a limited-time **Blue Bell** released a **Raspberry Fudge Brownie** flavor with almond ice cream, fudge brownie chunks, dark chocolate flakes and a raspberry sauce swirl. **Brownie Sundae Raspberry Swirl** is one of **Van Leeuwen's** seven new oat milk-based ice cream flavors.

Godiva Chocolatier and **General Mills, Inc.** have partnered on a new line of baking mixes in four dessert options. Godiva incorporated its signature chocolate into the line. The **Raspberry Chocolate Torte with Raspberry Glaze** was inspired by Godiva's iconic Raspberry Ganache Twirl chocolate. **White Raspberry Popping Candy** by **Tony's Choclonely** is the brand's newest chocolate bar made with 28% white chocolate, fruity raspberry pieces and popping candy. **Hostess Brands** has added an **Iced Berries & Cream Cheese Danish** to its portfolio.

body lotion and hand cream.

Inspired by wine, **Bath & Body Works Champagne Toast** highlights bubbly champagne, sparkling berries and sweet orange notes while **Bath & Body Works Black Cherry Merlot** is a fruity blend of dark cherry, black raspberry and merlot. In addition to candles and air care, these scents are available in hand soaps and bath and body products. **Glade's Holiday Limited Edition Peaceful Rose & Wood** collection features rhubarb, cassis, rose, muguet, raspberry, violet, guaiac wood and sandalwood accords and is offered in a candle, air freshener and plugin. For the holiday season, **PartyLite** introduced a **Plum Brandy** candle with plum, blackcurrant, Italian bergamot, blood orange and smoked brandy notes as well as a **Holly Jolly Berry** candle that blends holly berries and juniper sprigs with plums and gin-soaked strawberries. **Village Candle Fairy Dust** highlights plum, raspberries, cedarwood and warm amber.

Warm Vanilla & Toasty Marshmallow

Vanilla has a unique appeal and connotes warmth and comfort. It is a multi-faceted, universal ingredient used in a variety of flavored and fragranced consumer packaged goods. In the food and beverage sector, vanilla is always popular in ice cream and sweets and is spilling into beverages.



Vanilla is a go-to ice cream flavor or versatile base and marshmallow is a popular vanilla flavor twist. **Van Leeuwen** Ice Cream launched seven new flavors featuring a creamy house made oat milk-base and one of the flavors is **Oat Milk Brown Sugar Chunk**. At the beginning of the year BuzzFeed's **Tasty** brand unveiled a limited-edition line of eight ice cream flavors. **Vanilla Galaxy Twist** is one of the flavors and is made with blue frosting swirls, vanilla ice cream, caramel flavored stars and rainbow sprinkles. Vegetable-based ice cream alternative, **Peekaboo** offers five interesting flavors including: **Vanilla with Zucchini**, **Cotton Candy with Beets**, **Mint Chocolate Chunk with Spinach**, **Strawberry with Carrots** and **Chocolate with Cauliflower**.

S'mores, the beloved campfire treat, which features toasted marshmallow and chocolate sandwiched between two graham crackers is a classic flavor interpreted in a variety of sweet applications such as cookies and ice cream. This past summer, **Oreo's** released **S'mores** as a limited-time flavor. Last year, **Ben & Jerry's** added **Gimme S'more** ice cream to its lineup, which contains toasted marshmallow ice cream, chocolate cookie swirls, graham cracker swirls and fudge flakes. **Tasty's** take was **Peanut Butter S'mores Smash** ice cream that features peanut butter marshmallow ice cream, peanut butter cups, graham cracker crunchies, mini marshmallows and a fudge swirl. **My/Mo Mochi** ice cream added a triple layer innovation and the **S'mores** variety contains

On the fragrance side, vanilla adds sweetness, warmth and depth to base notes in fine fragrance, personal care and air care.

Juliette Has A Gun's latest scent is **Vanilla Vibe** and features top notes of fleur de sel, heart notes of natural vanilla absolute and orchid absolute and base notes of sandalwood, Tonka bean, brown musks and bezoin absolute. The **Yves Rocher Eau de Parfum Collection** features nine new fragrances and **Cuir de Nuit** is one of the scents. The marketing description reads "an interplay between shadow and light, between bare skin and dark leather, creating an irresistible, addictive scent with sensual notes." The fragrance uses "vanilla to depict all the nuances of this sensuality and Ivorian cocoa to add a subtle bitter touch, leaving a sensual and addictive trail." **Victoria's Secret Tease Heartbreaker** is "a bold clash of fruity brightness and delicious warmth" and contains Tonka bean and whipped vanilla cream base accords. **Ariana Grande's Thank U, Next** scent "disrupts the gourmand space by layering beautiful florals and a textured musk for a more transparent, but still addictive signature to the fragrance" and has fruity notes of pear, raspberry, and rose with sweet accords of creme de coconut, macaroon sugar and musk. **By Kilian Love, Don't Be Shy Rose & Oud** has key notes of Bulgarian rose, Southern Asian oud and a marshmallow core while **Rolling in Love** features creamy almond milk, iris, musk, rose, orange blossoms, gardenia, tuberose, freesia, ambrette seed, Tonka bean, and

mochi dough wrapped around graham cracker ice cream with a marshmallow center. For the holiday season, **Starbucks** introduced **Toasted Marshmallow Hot Chocolate**, which features hot chocolate combined with a mocha sauce, marshmallow syrup and marshmallow flavored whipped cream topped with caramelized sugar.

In the ready-to-drink (RTD) market, vanilla is a popular flavor, particularly in coffee creamers while Brown Sugar Milk Tea is all the rage in retail.

In 2019, **Coca Cola** added **Orange Vanilla Coke** and **Orange Vanilla Coke Zero Sugar** to its portfolio. The brand announced **Cherry Vanilla Coke** and **Cherry Vanilla Coke Zero Sugar** will join the Coca Cola portfolio in February 2020.

Pop & Bottle added RTD **Vanilla Cold Brew Almond Latte** to its plant-based line and unveiled **Supers**, a functional Oat Milk Latte range in three varieties. The **Vanilla** flavor features "a dose of marine collagen peptides to promote skin radiance." **Mooala Brand** released three new plant-based creamer flavors: **Banana Nut**, **Oats 'N' Crème** and **Vanilla**. **Elmhurst 1925** introduced a **French Vanilla Hemp Coffee Creamer**.

La Colombe Hard Cold Brew Coffee is a new product in partnership with **MillerCoors** available in **Black** and **Vanilla** varieties. Similarly, **Mad Bean Coffee** by **Geloso Beverage Group** launched in two flavors: **Mocha** and **Vanilla**. **Pabst Blue Ribbon Hard Coffee** is made with "rich, creamy milk and vanilla flavor with 5% ABV."

Bubble Tea, the Taiwanese tea-based drink usually made with sweetened tea, milk and boba (tapioca pearls), is exploding in the U.S. market. Several popular Taiwanese bubble tea chains are launching stateside. There are a myriad of bubble tea flavors and combinations available, but the most popular and well-known is **Brown Sugar Milk Tea**, which blends milk, brown sugar caramel and tapioca pearls. Taiwanese brand, **Tiger Sugar** popularized the drink and recently opened a New York City location. Similarly, **The Alley** opened its first New York City location. The brand is known for making its own syrup from Taiwanese sugarcane and tapioca pearls. Its most popular item is the **Brown Sugar Deerioca** made with creme brûlée milk. Bubble tea is so popular in Asia that **McDonalds** in the Philippines added **Milk Tea McFloat with Brown Sugar Pearls** to its menu and

vanilla. The scent is described as a "skin musk" and "an addictive intimate cocoon." **Estée Lauder Beautiful Belle Love** is categorized as an oriental gourmand with a romantic blend of Turkish rose, French sage, amber, almond, musk, orange blossom honey, patchouli and Madagascar vanilla.

In bath & body, **Love Beauty and Planet** added a **Yuzu & Vanilla** scent in liquid hand wash. For the holiday season, **Ulta** debuted the **Ulta Winter Vanilla** range in a bath essentials ornament set, body wash and body lotion. Also available at **Ulta**, the **Sweet & Shimmer Frosted Vanilla** collection is offered in bubble bath, bath fizzer disk, face & body wipes and body lotion. **Method** offers **Peppermint Vanilla** in gel and foaming hand wash. **Eos** created a **Fresh Vanilla Bean** holiday gift set with Shea lip balm, body lotion and hand cream. The scent "contains notes of whipped vanilla, soft musk and a hint of cozy caramel."

In candles, vanilla and gourmand scents are constant for the fall/winter season. **Glade's Holiday Limited Edition Sparking Citrus Sunrise** highlights a citrus opening with a spicy cardamom and ginger heart and sweet vanilla sugar ending. For a November exclusive, **Village Candle** introduced **Coconut Vanilla** with notes of butter, vanilla, cream, coconut and musk. **Yankee Candle's After Sledding** scent is self-described as "The scent of tempting treats - sweet maple, baking spices, and vanilla bean - offers a warm welcome after a day of winter fun." For the holidays, **Bath & Body Works** introduced a variety of new candles using vanilla and sweet gourmand accords. **Vanilla Bean Noel** contains notes of marshmallow fluff and vanilla cake and **Frosted Coconut Snowball** has toasted coconut, vanilla musk, and whipped cream accords. The **Sugared Snickerdoodle** highlights warm spices, creamy vanilla and sugared musk while the **Merry Cookie** features fresh baked cookies, sparkling sugar crystals and rich vanilla.

Bath & Body Works' Peppermint Marshmallow offers crushed peppermint, fluffy marshmallows and powdered sugar notes and **Toasted Marshmallow** includes smoldering woods, fire roasted vanilla and crystalized amber nuances. **PartyLite** offers a **Marshmallow Vanilla** candle in the brand's Fall/Holiday 2019 catalog described as "marshmallow melts into whipped vanilla with a caramel drizzle and sugarcane topping for a familiar sweet treat."

features tapioca pearls at the bottom, brown sugar syrup stripes and a soft-serve ice cream on top. **Domino's Pizza** in Taiwan took the concept further and debuted a limited-time **Brown Sugar Pearl Milk Tea Pizza**. The dessert pizza is topped with shredded mozzarella cheese, mochi balls and brown sugar tapioca pearls, which are then slathered in honey. In Malaysia, **Kentucky Fried Chicken** offers a limited-time **Brown Sugar Boba Tea Tart**, which features a puff pastry crust filled with bubble milk tea infused custard and topped with brown sugar jelly bobas.

Fresh Green & Outdoors

Time-crunched consumers are on the move and nutrition is important as they try to incorporate more vegetables into their diets. September is even National Fruits and Veggies Month. According to Innova Market Insights, there has been a +60% rise in global food and beverage launches using a vegetarian claim between 2011 and 2015. With the rise in flexitarian diets, there's a huge push towards plant-based products and individuals cannot escape it. According to the Plant Based Foods Association and The Good Food Institute, U.S. retail sales of plant-based foods have grown 11% in the past year, reaching \$4.5 billion. In response, brands are creating vegetable forward products, many of which are easy to prepare. To meet consumer demand, Quick Service Restaurants (QSR) are test marketing or introducing plant-based meat alternatives.



There are a plethora of plant-based consumer packaged food and beverages launching in the market as well as in QSRs. Plant-based meat alternatives are the industry darling and there has been an exuberant amount of press for plant-based meat alternatives being test marketed or introduced in the QSR sector. To name a

In fine fragrance, green accords create fresh and cool nuances, many suggesting nature and the great outdoors.

Vent Vert by **Pierre Balmain** is a classic green floral that originally launched in 1947 and was one of the first fragrances to incorporate galbanum. The scent was

few, McDonald's, Burger King, Kentucky Fried Chicken, Qdoba, Dunkin', Denny's and Pizza Hut are succumbing to the consumer demand.

Veggie flavors are common in dairy-based dips and spicy dill is a popular flavor emerging in snacks. **Marzetti** reformulated the brand's **Veggie Dips** with cleaner ingredients, less fat and calories. The dips are available in **Avocado Ranch**, **Blue Cheese**, **Dill**, **Ranch**, **French Onion**, **Southwest Ranch**, and **Spinach** varieties. **Belle Chevre** added **Garden Veggie** and **Roasted Red Pepper** flavors to its savory chevre cream cheese line. The Garden Veggie "lends a fresh garden taste to the tang of the cream cheese." **Prairie Farms** introduced a line of small-batch cottage cheese in seven varieties including two savory flavors: **Garden Veggie** and **Zesty Fiesta**. The **Pioneer Woman** (Ree Drummond) and **Kraft Heinz** have collaborated on a line of Ranch dressings & dips, homestyle BBQ sauces and pasta sauces. **Frontier Ranch** and **Spicy Southwestern Ranch** are the two tangy dressing and dip flavors while **Italian Sausage & Peppers** and **Garden Vegetable** are two of five pasta sauce varieties. In 2019, **Sabra** launched **Salsa Verde Hummus** as a limited edition flavor, which featured Sabra's Classic Hummus "topped with tangy roasted tomatillos, jalapenos, bright cilantro and lime."

In snacks, **PopCorners** has created a new line of **Flourish Veggie Crisps** made with vegetables in four flavors: **Greens & Beans**, **Roasted Beets**, **Toasted Cauliflower**, and **Harvest Kale**. One of Lay's most popular limited-edition flavors, **Flamin' Hot Dill Pickle** is back and has been added to the Lay's portfolio as a permanent addition. Similarly, **Blue Diamond** announced a **Spicy Dill Pickle** flavor will join the Bold Snack Almonds line in March 2020. The flavor "is a pairing of dill and spicy garlic with a balance of savory, spicy and sour seasoning."

Eataly restaurant **Birreria** is a seasonal rooftop restaurant. The winter theme is **Serra Alpina by Birreria** - fashioned after the Italian Alps, the restaurant highlights a rustic style of trees, pine leaves, snowflakes and a cabin created by MilkyWay Studio. A novel new product is **MeMento Green**, the newest flavor in the line of aromatic waters distilled with Mediterranean scents. The description reads "it takes us into the beautiful atmosphere of nature, where the scent of the forest, the trees' breath and the wonderful sensation of immersing

in 1991 and again in 1999. **Badgley Mischka's** newest scent is **Forest Noir** that contains citron, pear and mandarin leaf topnotes with a floral heart of night-blooming jasmine, Bulgarian rose and hyacinth and a base of moss, patchouli and vanilla absolute. Inspired by the crisp, wet aroma of fresh rain, **Le Labo Baie 19** combines dry notes of juniper berry with patchouli and green leaves. **Chloé** launched **Atelier des Fleurs**, a new collection of nine fragrances. **Herba Mimosa** is one of the scents and is a powdery green floral that highlights "mimosa [that] unveils tender, woody and vegetal notes." **Comme des Garçons** released **Clash**, a collection of three fragrances: **Celluloid Galbanum**, **Chlorophyll Gardenia** and **Radish Vetiver**, which are described as "bringing together elements that were never meant to be associated in surprising alliances." The **Celluloid Galbanum** is a floral green fragrance that combines lemon oil, galbanum, jasmine, cashmeran, dry amber and musk.

To bring the outside in, fresh green, outdoor scents are popular in candles during the fall/winter months. For the holiday, **Voluspa** launched **White Cypress** that is self-described as "notes of white cypress, freshly snapped and trimmed." **Yankee Candle Evergreen Mist** is new for the season and has notes of Douglas Fir, orange zest, forest air, evergreen bark, eucalyptus, balsam, vanilla and pine while **Glade's Holiday Limited Edition Icy Evergreen Forest** is made of green, pine, frosty air nuances, spruce, eucalyptus, fir balsam, fresh woods, labdanum and cypress notes. **Forbidden Forest** by **Village Candle** combines pine, herbaceous accords, cedarwood, patchouli and smoke while **Fireside Fir** has pine, cedarwood, patchouli and smoke notes. Similar in theme, **Method** introduced **Frosted Fir** in dish soap, gel hand wash and foaming hand wash for the holidays.

yourself in the untouched vegetation.”

Did You Know?

For over 45 years, Bedoukian Research has provided the highest quality products to serve your aroma chemical needs. Today, we offer more than 350 Flavor & Fragrance molecules available for use.

[Bedoukian's Dihydro Alpha Ionone](#) has a powerful floral character with distinct notes of violet and orris supported by sweet shades of raspberry. While it retains the expected ionone character, Bedoukian's Dihydro Alpha Ionone's berry aspects make it fruitier than alpha and beta ionone, adding an interesting effect to floral and fruity formulations, especially raspberry and blackberry, imparting a natural, seedy, ripe effect.



[Bedoukian's Vanillin Propylene Glycol Acetal](#) and [Ethyl Vanillin Propylene Glycol Acetal](#) offer long-lasting, intense vanilla aromas with aromatic, sweet and/or spicy undertones. Used to supplement Vanillin and Ethyl Vanillin, Bedoukian's Vanillin and Ethyl Vanillin PG Acetals are more stable in alkali environments and show far less discoloration, making them excellent for use in candles, soaps, and alkali flavors. Additionally, Bedoukian's Vanillin and Ethyl Vanillin PG Acetals are used to extend Vanillin and Ethyl Vanillin where their use is restricted.

[Bedoukian's 1,3,5-Undecatriene](#) offers an extremely powerful galbanum odor with fresh green, bell pepper nuances. A strong and diffusive material, Bedoukian's 1,3,5-Undecatriene imparts naturalness and great lift to a wide range of odor types. It is a key component in galbanum oil and works very well to support green notes in fragrances, particularly Cis-3-Hexenol and esters. At low levels, Bedoukian's 1,3,5-Undecatriene can add freshness to vegetable, herbal, and pineapple flavors.

So what are you waiting for? Don't be left out in the cold. Warm up your formulas with a little help from Bedoukian, and request your samples today!

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