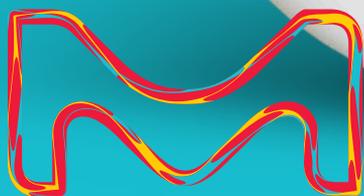


Application Guide

# Savor the Flavor

Savory ingredients for your formulation

Sixteenth Edition



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# Savor the Flavor

## Ingredients for the savory palette

It has been said that “variety is the spice of life” and whether you are a carnivore or herbivore we all crave and appreciate a hearty, savory or spicy dish from time to time. In this edition, we bring you a selection of ingredients that lend themselves to a diverse array of savory applications. Our ingredients’ high quality and consistency, along with our transparency are essential to your successful formulations.

These ingredients are sure to add a hearty note to any flavor or fragrance formulation.

Jamie Gleason  
Head of Flavors & Fragrances



Aparna Oak has been actively contributing to the flavor industry since 2005. Her inherent skills, aptitude for tasting and her breadth of knowledge about flavor compounds has allowed her to master the art of creating flavors.

Aparna began her career as a flavor technologist at Weber Flavors in 2005 where she quickly developed into a flavorist trainee. Her passion and perseverance helped her to become a creative flavorist and is now the Director of Flavor Innovation at Imbibe. Over the years, she applied her skillset to lead the flavor innovation team at Imbibe and developed the masking portfolio. She is a Certified Flavor Chemist and an active member of the Society of Flavor Chemists. She is a member of the monthly panel of certified flavorists that publishes the column 'Organoleptic Characteristics of Flavor Materials' in the magazine *Perfumer and Flavorist*. More recently, she authored, "Plant to Glass, Oat Milk from a Flavorist's Lens," in 2019. She had the privilege to be a judge at the World Beverage Innovation Awards Panel (FoodBev) in 2016, 2017, and 2019.

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It is this expertise that we bring to you in the following pages. We thank Ms. Oak for evaluating these products and hope her insights are helpful and inspiring.



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# Safe, certified ingredients for flavor & fragrance formulations



## Egg

2-Furanmethanethiol formate (**FEMA # 3158**) provides sulfurous notes.

## Chicken

trans,trans-2,4-Decadienal (**FEMA # 3135**) enhances savory chicken character.

## Spinach

2-Propylpyrazine (**FEMA # 3961**) imparts a musty, green character to fresh vegetables.



## 2-Ethyl-4-methyl-1,3-dithiolane, ≥95%

Kosher, Halal



This is an extremely potent ingredient with an intensely pungent sulphureous odor reminiscent of browned onion and garlic (like French onion soup). It's also very diffusive. This ingredient will lend itself to perfect use for soup mixes especially French onion and where a browned onion garlic note is desirable, salad dressings, and coffee flavors where a smoky, old burnt coffee note is desired.

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<b>Key Organoleptic Characteristics</b>	Garlic, horseradish, onion, sulfurous
<b>Natural Occurrence</b>	Not Found in Nature
<b>Aroma Characteristics</b>	0.1% in Ethanol. Sulphury, pungent, savory, browned onion, burnt coffee like, savory, alliacious.
<b>Taste Characteristics</b>	1 ppm. Alliacious, caramelized onion like, savory, smoked meat, old burnt coffee.
<b>Usage Level</b>	Ranging from 1 - 2 ppm depending on application.
<b>Product Number</b>	<b>W487012</b>

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## 2-Methoxypyridine, ≥98%

Kosher, Halal



This compound has an intense burnt, roasted yet green aroma. There is a fermented note throughout start to finish in this ingredient. This ingredient would be interesting to try in – green tea flavors, fermented vegetable/pickle flavors, cucumber, green melon, watermelon rind note, and in kombucha flavors – its green and fermented note will blend well with a kombucha base.

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<b>Key Organoleptic Characteristics</b>	Green, burnt, fatty
<b>Natural Occurrence</b>	Not Found in Nature
<b>Aroma Characteristics</b>	0.1% in Ethanol. Burnt, tobacco like, green, weedy with a fatty green undertone.
<b>Taste Characteristics</b>	1 ppm. Green, burnt, herbal, weedy, fermented, fatty/leafy green undertone.
<b>Usage Level</b>	Ranging from 0.1 - 5 ppm depending on application.
<b>Product Number</b>	<b>W463901</b>

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## 3-(Methylthio)-1-hexanol, natural, ≥98%, FG

Natural, Kosher, Halal, IFRA



This compound has a sulphury yet green odor. It has a metallic nuance and pungency to it like but not quite as intense as wasabi. On dry out it has a distinct vegetative and earthy note. All these organoleptic characteristics lends this ingredient to use in flavors like – coffee, tropical fruits like passionfruit, tomato and vegetable flavors, and alliaceous blends like green garlic, green onion, and wasabi.

<b>Key Organoleptic Characteristics</b>	Green, pungent, earthy, vegetable, spicy, sulfurous
<b>Natural Occurrence</b>	Yellow passionfruit juice, jackfruit
<b>Aroma Characteristics</b>	0.1% in Ethanol. Green, sulphury, mild wasabi like, vegetative, earthy.
<b>Taste Characteristics</b>	2.5 ppm. Green, vegetal, canned, slight spice nuance at the back end.
<b>Usage Level</b>	3 - 6 ppm depending on application.
<b>Product Number</b>	<b>W343847</b>

## Diisoamyl disulfide, $\geq 98\%$

Halal



This thioether of furfural is a very interesting compound with a raw, green yet sweet onion like undertone.

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<b>Key Organoleptic Characteristics</b>	Onion, sweet
<b>Natural Occurrence</b>	'Garlic vines' of the genus <i>Mansoa</i> in the Brazilian and Argentinian rain forests
<b>Aroma Characteristics</b>	0.1% in Ethanol. Sweet, green, onion like undertone but not pungent.
<b>Taste Characteristics</b>	0.5 ppm. Sweet, green, raw onion like yet not pungent.
<b>Usage Level</b>	0.001 – 0.5 ppm depending on application.
<b>Product Number</b>	<b>W457533</b>

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# S-Isopropyl-3-methylbut-2-enethioate, ≥95%, FG

IFRA



This thioester has a very pungent and alliaceous aroma, extremely diffusive yet potent. Aside from the alliaceous part, it has a gasoline like smell that is almost metallic. Possible uses may be in sensate flavors, alliaceous blends like wasabi, meat spice rubs flavors.

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<b>Key Organoleptic Characteristics</b>	Green, alliaceous
<b>Natural Occurrence</b>	Found in nature
<b>Aroma Characteristics</b>	0.1% in Ethanol. Alliaceous, diffusive, green, earthy.
<b>Taste Characteristics</b>	1 ppm. Raw garlic, green, musty with a backend of tingling spice nuance.
<b>Usage Level</b>	0.1 - 5 ppm depending on application.
<b>Product Number</b>	<b>W426060</b>

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## 2-Pentylthiophene, ≥98%, FG

Kosher, Halal



It has a distinct fatty yet savory aroma that reminded me of roasted rotisserie chicken skin, potato French fries. Recommend use of this ingredient in flavors like – roasted chicken, French fries’ seasonings, roasted nut flavors, and fermented grain nuances like some of the aged hard liquors like whiskey, tequila.

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<b>Key Organoleptic Characteristics</b>	Fatty, meaty, chicken
<b>Natural Occurrence</b>	Roasted beef, roasted chicken, potato fries, soybean
<b>Aroma Characteristics</b>	0.1% in Ethanol. Fatty, savory, meaty, rotisserie chicken skin, fermented.
<b>Taste Characteristics</b>	0.5 ppm. Fatty, animalic nuances, roasted undertone, slight nutty.
<b>Usage Level</b>	0.01 – 50 ppm depending on application.
<b>Product Number</b>	<b>W438700</b>

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# Bacon dithiazine, solution in EtOH

Kosher



As the name suggests, it is very much bacon like especially crisp fried bacon. Hence, I would recommend using this ingredient in flavors like bacon dripping fat, fried meaty notes to any meat flavors. It also has a smoky-ness to it which will lend itself to good use in seasonings for smoked meats.

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<b>Key Organoleptic Characteristics</b>	Bacon, meaty, smoky
<b>Natural Occurrence</b>	Not Found in Nature
<b>Aroma Characteristics</b>	0.1% in Ethanol. Meaty, smoky, fatty, fried bacon.
<b>Taste Characteristics</b>	1 ppm. Savory, fatty, bacon.
<b>Usage Level</b>	0.04 – 2 ppm depending on application.
<b>Product Number</b>	<b>W401755</b>

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# Methyl furfuryl mercaptopropionate, ≥98%, FG

Halal



This is an extremely potent ingredient with a little going a long way in your formulation. It is very sulfurous but also has an earthiness to it. I would recommend using this ingredient in flavors like chocolate, coffee, savory blends for meat rubs that include garlic and onion, sauteed mushroom note.

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<b>Key Organoleptic Characteristics</b>	Earthy, sulfurous
<b>Natural Occurrence</b>	Not Found in Nature
<b>Aroma Characteristics</b>	0.1% in Ethanol. Savory, earthy, sulfurous.
<b>Taste Characteristics</b>	0.5 ppm. Burnt coffee, sauteed mushroom, dark soy sauce, earthy with a metallic backend.
<b>Usage Level</b>	0.1 – 1 ppm depending on application.
<b>Product Number</b>	<b>W453801</b>

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## 2-Propanethiol, natural (US), ≥98%, FG

Natural (US), Kosher, Halal



This is another extremely potent ingredient with a little going a long way in your formulation. It is extremely sulfurous with gassy notes. I would recommend using this ingredient in flavors like savory blends for meat rubs that include garlic and onion, meaty, brothy notes, might work very well in soup bouillon flavors. At extremely low levels, under 2ppm – this ingredient might do wonders for a vanilla custard flavor where the egg yolk effect is desired.

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<b>Key Organoleptic Characteristics</b>	Sulfurous, earthy
<b>Natural Occurrence</b>	Garlic, onion, beer
<b>Aroma Characteristics</b>	0.1% in Ethanol. Sulfurous, rotten eggs, savory, earthy.
<b>Taste Characteristics</b>	2.5 ppm. Eggy, old boiled egg yolks, strong taste almost burning with a metallic note.
<b>Usage Level</b>	0.1 – 200 ppm depending on application.
<b>Product Number</b>	<b>W389755</b>

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# 4,5-Dimethyl-3-hydroxy-2,5-dihydrofuran-2-one, natural, ≥97%, FG

Natural, Kosher, Halal, IFRA



This ingredient has an intense burnt, sweet, caramellic aroma. There is a maple and caramellic note throughout start to finish in this ingredient with a distinct fenugreek linger. This ingredient will be a staple one for all brown indulgent flavors like maple, caramel, butterscotch, toffee, chocolate and coffee

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<b>Key Organoleptic Characteristics</b>	Caramel, maple, sweet
<b>Natural Occurrence</b>	Coffee, fenugreek, maple syrup, sake, sherry
<b>Aroma Characteristics</b>	0.1% in Ethanol. Sweet, brown, burnt sugar, maple.
<b>Taste Characteristics</b>	10 ppm. Brown, maple, burnt sugar, fenugreek linger.
<b>Usage Level</b>	0.01 – 20 ppm depending on application.
<b>Product Number</b>	<b>W363499</b>

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## Myrcene, sum of isomers, ≥90%, natural, FG

Natural, Kosher, Halal, IFRA



Naturally occurring monoterpenes in many fruits, herbs, vegetables. It is a major component of essential oils such as hops, bay leaf, and lemongrass. It's fresh green terpenic aroma is reminiscent of young green mangoes. Use of this ingredient will benefit flavors like – an unripe mango, green bell pepper, green tomato, citrus blends, lemongrass.

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<b>Key Organoleptic Characteristics</b>	Woody, herbaceous, balsamic
<b>Natural Occurrence</b>	Occurs naturally in more than 200 plants, including verbena, lemongrass, hops, citrus peel oils and bay
<b>Aroma Characteristics</b>	1.0% in Ethanol. Fresh, green, citrusy, terpy, peppery, herbal.
<b>Taste Characteristics</b>	100 ppm. Green, vegetative, herbal, citrus nuance, green/unripe mango skin with a peppery back end.
<b>Usage Level</b>	0.5 – 13 ppm depending on application.
<b>Product Number</b>	<b>W276212</b>

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## 3,5-Undecadien-2-one, 10% solution in EtOH, natural (US)

Natural (US), Kosher



It has a green, fatty, fried profile with a vegetative undertone – this ingredient will be very helpful in flavors like the skin part of cucumber, close to the rind note of honeydew melon, watermelon, cilantro herb or salsa flavors/dressings, meat rubs, and meat flavors like beef, beef buillion.

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<b>Key Organoleptic Characteristics</b>	Cucumber, fatty, green
<b>Natural Occurrence</b>	Roast beef
<b>Aroma Characteristics</b>	1% in Ethanol. Green, fatty, cucumber skin, fried.
<b>Taste Characteristics</b>	5 ppm. Green, Fatty, meaty, vegetative.
<b>Usage Level</b>	1 – 30 ppm depending on application.
<b>Product Number</b>	<b>W474625</b>

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