



cis-Jasmone

This ingredient excels in fruit flavors, adding a level of depth, realism and complexity that has few rivals.

John Wright; johnwrightflavorist@gmail.com

Cis-Jasmone (FEMA# 3196, CAS# 488-10-8) has a character that is exceptionally difficult to pin down and describe. As the name implies, it contains a strong floral element and makes a highly significant contribution to the profile of natural jasmine flowers. Nevertheless, from a flavor viewpoint, it would seem to be better classified primarily as an herbal note. It is noticeably waxy, but also has distinct elements of celery and mint.

The odor of this chemical is so complex that it might seem to have a narrowly restricted range of uses; however, this is not the case. *cis*-Jasmone is surprisingly useful in a very wide range of flavors, despite its complexity. It excels in berry and other fruit flavors, adding a level of depth, realism and complexity that has few rivals.

The dose rates given below are the levels of *cis*-jasmone to be used in flavors that are intended to be dosed at 0.05% in a ready-to-drink taster or beverage.

Berry Flavors

Blackcurrant: Many blackcurrant flavors are little more than buchu oil-based caricatures, and *cis*-jasmone would frankly be wasted in them. In the increasingly popular authentic style of flavors, it can play a very useful role at around 150 ppm.

Raspberry: The best raspberry flavors have a mouthwatering richness to them, somewhat akin to fully ripened berries grown at home. This ingredient makes a major contribution toward achieving this character at levels around 100 ppm.

Blueberry: The mouthwatering effect is almost as spectacular in blueberry, a flavor category that can often



lack depth. One hundred ppm is also an effective level in these flavors.

Blackberry: Blackberry flavors are similar in many respects to raspberry flavors, with an added musky note, but much else unchanged. Not surprisingly, this ingredient works equally well at around 100 ppm.

Gooseberry: This flavor category is firmly in the “minor league,” but it is found occasionally and is not especially easy to reproduce accurately. Lower levels of this ingredient are more appropriate, around 50 ppm in gooseberry flavors.

Strawberry: Here the effect of *cis*-jasmone is, of necessity, relatively subtle and so is a distinctly secondary ingredient. Nevertheless, 10 ppm of *cis*-jasmone can make a noticeable difference, especially in wild strawberry flavors, where it enhances the floral note.

Cherry: Similarly, 10 ppm or less is all that is required in authentic-style cherry flavors to add a little welcome depth and complexity. This ingredient

would be wasted in simple tutti frutti-style cherry flavors.

Tropical Fruit Flavors

Mango: In the category of tropical fruit flavors, mango is easily the most appropriate flavor profile for this raw material. The slightly waxy, herbal note fits very well into the mango skin note. Use levels can vary, depending on the amount of skin character required, but 200 ppm is a good place to start.

Pineapple: Fifty ppm is a useful level for *cis*-jasmone in authentic-style pineapple flavors. At this level, it fleshes out the character, adding depth and counterbalancing what can often be an over-dominant fruity, ester note.

Guava: A level of 50 ppm or rather less also works quite effectively in guava flavors, adding realism and depth and a very subtle floral character.

Kiwi: *cis*-Jasmone adds depth and complexity to kiwi flavors, although it only plays a secondary role in the flavor

category. A level of 30 ppm is a good starting point.

Passion fruit: The effect in passion fruit flavors is quite subtle but, nevertheless, worthwhile, adding useful realism and complexity at around 10 ppm.

Lychee: Lychee flavors are quite delicate and already have a notable floral aspect, so it is important not to add too much *cis*-jasmone. Five ppm is an effective starting level.

Banana: Although banana flavors are generally far from delicate, a similar level of addition, around 5 ppm, also works well in this category.

Citrus Flavors

Lime: Lime flavors with the rather medicinal profile of distilled lime oil can benefit most from this ingredient. One hundred ppm is an ideal level. Flavors that exhibit the profile of the fresh fruit can also benefit; however, the level of addition is lower, around 30 ppm.

Bergamot: *cis*-Jasmone is especially effective in bergamot-based flavors intended for use in Earl Grey tea because it is similarly helpful in both the bergamot and the tea profiles. Fifty ppm is an ideal level.

Lemon: Lemon flavors benefit from the addition of this ingredient in a very similar way to fresh lime flavors. The ideal level of addition is similar, around 30 ppm.

Other Fruit Flavors

Apricot: *cis*-Jasmone is especially effective in apricot flavors, harmonizing well with the linalool character that often dominates this flavor category. It adds complexity and enhances the “furry” skin note at levels around 200 ppm.

Peach: The effect in peach flavors is very similar to that in apricot flavors but, because the linalool note is normally less pronounced, the ideal level of addition is nearer to 100 ppm.

Nectarine: One hundred ppm, or slightly lower levels, work equally well in nectarine flavors, enhancing the fleshy character and the “furry” notes.

Apple: Only a trace of *cis*-jasmone is required in apple flavors, around 10 ppm, but this small addition is quite effective in adding complexity.

Floral Flavors

Jasmine: Unsurprisingly, *cis*-jasmone is an almost essential ingredient in jasmine flavors, adding realism and body. A level of 500 ppm is a good starting point.

Chrysanthemum: This is an altogether less expected floral use of this ingredient, but similarly high levels, in the region of 500 ppm, work equally well in this difficult flavor category.

Other Flavors

Tea: Levels of use in tea flavors can vary dramatically, from up to 1,000 ppm in black tea flavors to 100 ppm in green

tea profiles. This ingredient pairs very well with linalool and linalool oxide, so the higher the levels of these ingredients in the tea, the higher the level of *cis*-jasmone that can be accommodated.

Peppermint: Many commercial peppermint flavors derive a noticeable degree of harshness from the presence of isomenthone and other key ingredients, together with the relative lack of “rounding” ingredients. This chemical can be very helpful at 50 ppm, adding body and smoothness in peppermint flavors.

Spearmint: Similar levels also work well in spearmint flavors, adding complexity, body and authenticity.

Honey: *cis*-Jasmone works best in honey flavors that have some level of floral note, and 30 ppm is a good starting point.

Celery: Thirty ppm also adds significant realism to celery flavors, a profile that can often seem a little one-dimensional.

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