

## Application sheet Masking plant protein off-flavours



Kingusto is a natural umami rich food ingredient that is used in a broad range of products. Due to its savoury flavour and masking effect for off-flavours in plant proteins, it is very suitable to use in vegetarian products.

Salt and sugar are often used to mask off-flavours in food products. However, taking a health perspective into account, it is better to use less salt and sugar. Therefore the search for products that can mask off-flavours is on. Kingusto is one of the products that can help, it masks the off-flavours of plant proteins that are often used in meat replacers.

Frequently used plant proteins in meat replacers are soy, pea and fava bean proteins. These proteins have a typical flavour with some off-notes. In a simple example recipe for a meat replacer with those proteins, the masking effect of Kingusto was tested.

To illustrate the effect, a simple vegetarian hamburger recipe is used. The addition of other flavourings, like herbs and spices, were kept at a low level, to be able to experience the effect of Kingusto. If 2.0% Kingusto is used, an optimal masking effect is obtained. Next to this Kingusto makes sure you have to use less other flavourings, since it enhances the savoury flavours present. This recipe is a plain base recipe. Soy, pea and fava bean texturate can be used in this recipe. The soy texturate gives a slightly firmer end product than the pea and fava bean texturate, but the flavour effect is clear for all proteins. Using Kingusto in your plant based hamburger really helps to mask off-flavours, reduce the amount of other flavours needed and gives a complete, savoury taste to your product.



**Table 1. Example recipe plant protein burgers**

| Ingredient                      | Reference (g) | With Kingusto addition (g) |
|---------------------------------|---------------|----------------------------|
| Methocel MX                     | 1.8           | 1.8                        |
| Sunflower oil                   | 2.8           | 2.8                        |
| Water                           | 65.0          | 63.0                       |
| Soy, pea or fava bean texturate | 20.0          | 20.0                       |
| Bamboo fibre                    | 1.0           | 1.0                        |
| Gluten                          | 8.0           | 8.0                        |
| Hamburger spice mix             | 1.0           | 1.0                        |
| Salt                            | 0.4           | 0.4                        |
| Kingusto                        | -             | 2.0                        |
| <b>Total</b>                    | <b>100.0</b>  | <b>100.0</b>               |

**Preparation method:** Make sure to work cold, it is best to keep the temperature around 2-4 °C.

Make an emulsion with the Methocel MX, sunflower oil and 20 g water. Let the soy texturate hydrate in the remaining water for 20-30 minutes. Mix the hydrated soy texturate with the hamburger spice mix, salt, Kingusto, bamboo fibre and gluten. Mix the emulsion through the soy texturate mixture. Form the mixture into hamburgers.

## Technical support

The examples shown are to give you an idea of the effect of Kingusto in this application. Of course Kingusto also works in a lot of other applications. Other applications are available on request.

For further assistance or additional information, do not hesitate to contact :

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We are happy to assist you!

