

The unique mushroom flavour

Mushrooms have a rich, savoury flavour, much loved by consumers, chefs and cooks the world over. What is it that makes mushrooms so tasty? It is the natural glutamates in mushrooms that give them their deep flavour, making them a favourite with meat eaters and vegetarians alike.

Glutamate is an amino acid that is found in all foods with protein. Glutamate is also produced by the body, with high levels in the muscles and the brain. Glutamate is used as a neurotransmitter in the brain by half of all nerve cells.

The glutamate level in the mushroom increases as the mushroom matures from a button to a flat mushroom. Natural glutamate is also responsible for much of the flavour in parmesan cheese, soy sauce, anchovies, tomato juice, Vegemite and Marmite.

We often hear that the range of tastes in food include salty, bitter, sweet and sour. Foods with natural glutamates provide a fifth taste, now called umami, describing a food that has a savoury or meaty taste. Umami is a Japanese term first coined by Kikunae Ikeda in 1908 for the taste of a broth made from seaweed, dried fish and shiitake mushrooms.

Certain proteins, called hydrophobins, are found only in mushrooms and these proteins contribute to the texture of the mushroom, making eating them so enjoyable. It is the combination of natural glutamates, protein and other natural flavour compounds that makes the mushroom texture and flavour so pleasurable.

You can now see why mushrooms are the flavour that everyone enjoys and they are a very successful substitute for meat. We sometimes consider mushrooms as the meat-eaters vegetarian choice. It also helps understand why mushrooms complement so many meat dishes.

The natural free glutamates in mushrooms are not to be confused with the monosodium glutamate (MSG) sometimes added to foods as a flavour enhancer. There is no MSG in mushrooms.

Resources:

<http://www.ific.org/publications/brochures/msgbroch.cfm>

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Maga JA. Mushroom flavour. J Agric Food Chem 1981; 29 (1): 1-4

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