

Smoke Without Fire

With the demand for smoked foods on the rise, leading speciality chemicals distributor and supplier, Azelis sheds light on smoke flavourings as reliable solutions for food processors and the advantages of using them over the traditional method of smoking.

By **Dr. Peter Henriksen**, International Business Manager, Azelis

Grilling and barbecuing are extremely popular trends around the world. Television cooking shows and food magazines are describing in detail the art of smoking various foods – from traditional meat dishes, like beef and lamb over potatoes and onions, to fruit desserts. In Europe, about 30 per cent of all 'smoked' foods are the result of added flavourings, rather than traditional methods, and this is set to grow to 70 per cent in the next five years.

Azelis has been developing and distributing smoke flavourings since 1968 and is one of the pioneers in the European market for these flavours. To keep up with competition,

Azelis innovates and invests heavily in R&D with the support of its food laboratories worldwide that are equipped with highly skilled technologists. In Asia-Pacific, Azelis is not only investing but also seeing significant growth in business. One of the products in focus is our smoke flavouring under the brand name Scansmoke®.

Clearing Up Misconceptions

Mintel ranks smoke flavourings as the fourth most popular ingredient in new savoury food launches in Europe in the last three to four years. Despite the growth in popularity, there are consumers who have the misconception that smoke flavours are the result of a chemical reaction in a big factory. This is far from true.

Smoke flavourings are still manufactured by burning wood or sawdust, as was the case with traditional methods. The smoke vapours are then condensed and trapped in cold water to remove the tar. In other words, smoke is 'put into a bottle'. It mainly comprises flavour components from the wood lignin, which is the main contributor to the smoky flavours. Also dominating are the components derived from the wood sugar (cellulose), which are mainly responsible for colour development, and balancing of flavours with the addition of a sweet note. Finally, the bigger groups of components are the organic acids – mainly acetic acid – that contribute to the overall flavour with a sour note.

Smoke Flavours from Azelis

Azelis offers some of the most concentrated smoke flavourings in the world, making them very popular in the flavour and spice blends industry. The smoke flavourings can be found in powders, oils and water-soluble forms which make them suitable for a variety of applications. The flavourings are widespread in the snack industry for products that include notes of bacon, ham and BBQ. Soups and a range of BBQ sauces are also popular applications.

The use of Scangold® assists in the development of colours and roasted type flavours and gives increased crispiness and juiciness to a wide range of foodstuffs.





When added in low dosages, smoke flavourings can boost the overall flavour profiles of soups and sauces, without being smoky.

This Scandinavian range includes other beech wood flavours that can replace traditional smoking and add a premium taste flavour as well as a golden colour to the food item.

Advantages Over Traditional Smoking

The advantages of transitioning from traditional smoking to smoke flavouring are plenty. For a start, as the tar has been removed, it is healthier and also cleaner. The messy reality of tar particles clinging to walls, floors, cracks and, most importantly, food products, can be eradicated.

Furthermore, smoke flavourings help ensure quality control. A pump that atomises liquid smoke will result in a standardised end product in a way that burning sawdust, which could be more or less wet or varied in temperature, will not. It is also possible to dip or shower the food product to get same smoky end result. Azelis' products make for faster smoking, which translates into higher yields. In addition to aforementioned benefits, there is reduced weight loss too.

Smoke flavouring is also aligned with top consumer demands in the region. According to Mintel, the South East Asian cuisine is dominated by the first key trend "In Tradition We Trust". Consumers are seeking comfort from modernised versions of age-old formulations, flavours and formats. Unlike Europe, smoke flavourings have not been a key ingredient in Asia for centuries, but this ancient flavour that can bring in a lot of value to almost any foodstuff. Another key trend, "Power to the Plants", is seeing the popularisation of vegetarian, vegan and other plant-based dishes as consumers desire natural, simple and flexible diets. As Mintel reports, vegan and vegetarian

claims were on the rise in South East Asia, with vegetarian claims increasing by 140 per cent in the period between 2012 and 2016, and vegan claims increasing by 440 per cent during the same period for food and drink launches in the region. Smoke flavourings can add value to vegetarian and vegan dishes with its unique flavour profile that contributes savoury and meat notes.

In some dishes, smoke flavourings can also add a salty note to the final food product, making it possible to reduce the amount of salt used in the final recipe. The flavour boosting effect of smoke flavourings is something that will be increasingly used in the food industry. The use of flavourings such as smoke, that can resemble monosodium glutamate or yeast as a flavour enhancer, will also grow. When added in low dosages, smoke flavourings can boost the overall flavour profiles of soups and sauces, without being smoky.

Useful Colour Agents

Aside from boosting taste, smoke flavourings are effective colouring agents too. This is achieved through the Maillard reaction, that typically



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starts at around 50-60 degrees Celsius. This reaction naturally takes place when foods containing proteins and sugars are heated at high temperatures. Scansmoke® creates a brown colour on the food product when heated. The main component responsible for this is hydroxyacetaldehyde, which is the simplest form of sugar. Hydroxyacetaldehyde is also the main browner in the Scangold® range. The use of Scangold®, made from glucose syrup, assists in the development of colours and roasted type flavours and gives increased crispiness and juiciness to a wide range of foodstuffs. While the Maillard reaction and the action of the browning agents is mainly catalysed by heat, pH, moisture-content and time of treatment also play important roles. The golden brown and roasted colour, flavour and texture developed by using Scangold® are uniform and do not fade.

This type of browning agent works excellently in both ordinary and microwave ovens. The colour is fixed and does not fade and looks much more natural compared to the use of standard caramel colours.

Scangold® comes in two product forms – powder and liquid. Scangold® V is a range of aqueous solutions that can be applied externally to food products. The colour and texture developed by the use of Scangold® V can resemble that of a “smoked” product, but without the smoky taste. There are many applications for this type of browning agent, but the most popular are poultry, meat and delicatessen, batter and breadings, ready meals and seasoning blends and marinades.

The bakery segment also finds premium use of this type of product for the colour of baked breads, including colour and texture for biscuits and crackers. Colourants including annatto, carotene

and caramel colours can be replaced by the use of Scangold®.

What's Next

The next generation of smoke flavourings includes smoke flavourings where the preservative components in smoke have been isolated or upgraded. Thousands of years ago, smoking was one way of preserving food. By isolating preservative components in smoke, the shelf life of meat products can be extended significantly. It has been recorded that fresh meat can have its shelf life lengthened from 6-12 days. Similar results have also been recorded for processed meats such as hams and sausages.

Azelis is very excited about the present and future opportunities of their smoke flavourings and browning agents, by creating new innovations in the food segment. All that is needed is a bottle of Scansmoke® and Scangold®. **FBA**