

A cheese flavour collection for bakers

Lorraine Kelly, Senior Category Manager at Synergy Flavours unveils opportunities in cheese flavouring by looking at scientific profiles and understanding how to use authentic ingredients to encourage repeat customers

For many of us, cheese and bakery go hand in hand. Melted on toast, sliced on crackers or stretching over pizza, cheese offers that perfect balance of nutrition and comfort. Almost 500 European bakery product launches in 2019 featured cheese as an ingredient, making it the most popular flavour variant for savoury bakery products outside of seeded and garlic.

But cheese flavour can often be found lacking in baked goods or generic in character for reasons which include process challenges, price or nutritional requirements, whereby bakers are limited in the amount of cheese which can be added. The use of cheese flavours can be vital in delivering the complex flavour profiles that create a complete and satisfying cheese taste. This is where Synergy's Dairy by Nature collection of cheese flavours excels,

delivering authentic cheese taste at a fraction of the cost of artisanal cheese.

The quest for perfection

According to a Mintel survey in December 2019, flavour is one of the most important factors for consumers when purchasing food and drink. Over half of US consumers identify taste as a top three most important factor when purchasing a food or drink. 55% of UK consumers agree and would choose a branded product over an own label one if it tasted better. To create the most authentic cheese flavours, it's important to understand what makes a great Cheddar cheese, for example, taste as it does and identify what flavour components within cheeses differentiate one from another. In Synergy Flavours' quest to create the most authentic cheese flavours for bakery and snacks,

we challenged our research team to answer consumer demand for flavour and manufacturers' demand for consistency, value, quality and ease of use.

Bringing the balance back in favour of science

Challenge accepted. Our team used sensomics, an in-depth, science-led approach linking sensory and analytical science to map out the flavour drivers of cheese taste. We were able to characterise different cheeses at a molecular level - creating their very own 'cheese fingerprints' - to understand and quantify the key compounds (aromas) influencing taste.

Traditionally in flavour creation, a flavourist's skill and creative flair determines what ingredients are used and at what levels. Analytical methods such as gas chromatography-mass spectrometry (GCMS) may also be used to identify flavour components in the food source. However, unless they are at a sufficient concentration, they may be missed. Our research found that many cheese flavour compounds present at a very low concentration have a high impact on the overall flavour profile.

Our approach allowed us to quantify key cheese flavour compounds in a range of cheese types including Cheddar and Gouda, popular choices in European bakery, and using the odour threshold value (OAV), determine their importance and contribution to the overall flavour profile. The higher the OAV, the more



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important the compound. In Cheddar, we found a complex aroma profile, detecting 19 key cheese aromas present, including a few surprises such as baked potato aroma!

In Gouda, the majority of key cheese aroma compounds had acidic, creamy or waxy attributes, indicating Gouda has a mild, mellow aroma. With this insight to hand, our dairy flavourists were able to recreate these specific cheese profiles, using a combination of aroma chemicals and real cheese ingredients from grass-fed milk supplied by our farmer shareholders in West Cork, Ireland.

Using this sensomics approach on cheddar and gouda we can see the similarities and differences between the profiles.

Innovation for the future

The food industry is set to see a shift in consumer buying habits, from the way consumers conduct their shopping, to the food choices they make. As consumer preferences evolve, manufacturers will continue to be challenged to deliver more from their products in the form of taste, dietary and nutritional requirements - all key success factors that will encourage repeat purchases. Associating brands with moments of joy will resonate with consumers in the current climate. Texture, flavour intensity and premium ingredients are key product attributes on which indulgence can be judged.

We have seen that in times of uncertainty, consumers’ worth for identity and sense of community increases in importance. Products that combine global and local



ingredients resonate with consumers and in this scenario the addition of specific regional cheese profiles can make new connection points for the consumer as it evokes feelings of regional pride or loyalty. In recent consumer research conducted by Synergy (in partnership with Vypr), it was no surprise to see that Cheddar remains the UK's favourite cheese, whilst in mainland Europe, varieties such as Emmental and Gouda are preferred. However, it's important also to consider the target demographic for the product, since our research found that younger consumers tend to have a preference for creamier and milder cheese, such as mascarpone, whilst older consumers are more accustomed to stronger and full-flavoured cheeses, such as Stilton and goat's cheese.

UK consumers, 2020 Vypr panel

Consumers would like to experiment and try new ways of cheese consumption and bakery is the perfect vehicle to do so. 62% of Italian consumers claim they like to try new types of cheese, Mintel found. With so many varieties of cheese now available, there are options to suit all tastes and product applications.

The below flavour map from Technomic gives a view of the types of cheeses appearing on restaurant menus in 2020 from introduction and growth in higher

end, niche and fine-dining restaurants, to becoming mainstream and well established, or mature in pubs, high street chains and quick service retail.

Keeping it real

Whether it's providing a better tasting, healthy alternative, evoking nostalgia, or satisfying consumers’ cravings for authentic global profiles, there remains a constant: bakers need to keep their products real and flavour innovation can be the key to meeting these demands. Dairy is in our DNA. Our parent company Carbery Group has been producing award-winning Cheddar cheese and food ingredients since 1965. Synergy's Dairy by Nature cheese collection helps bakers deliver the taste experience that consumers want, affordably and easily. From mild, creamy Goudas to the more complex, savoury Cheddars, our flavours are designed to appeal.

The Dairy by Nature range of authentic dairy and dairy-free flavours optimises flavour in a variety of products – from fresh and cultured dairy products, to nutritional, bakery, beverage, confectionery and even savoury applications. They mask undesirable off-notes in calorie-reduced and dairy-free recipes to deliver the healthier, great tasting products that consumers expect.