

“Sugar reduction guidelines require scientific response,” says Leatherhead

30 March 2017: New guidelines from Public Health England to reduce sugar in everyday foods eaten by children create complex challenges that call for science-led innovation says Leatherhead Food Research.

Reformulation of food products is a common response to health-related issues. However, in the case of sugar reduction, this is not straightforward.

Depending on the properties of the product in question, sugar can contribute much more than taste. It has preservation qualities, so plays a role in the shelf-life of a product. It also impacts texture, aeration, fermentation (for products containing yeast), bulk and visual appeal. Food manufacturers need to consider interactions between ingredients in a recipe to understand how sugar reduction or replacement will affect the finished product.

A scientific approach known as ‘blueprinting’ is an effective way to address these complex challenges, says Leatherhead Food Research’s head of microscopy Professor Kathy Groves.

“Blueprinting creates a technical map of a product,” Groves explains. “It considers both the sensory and scientific attributes that explain its profile, drawing on microscopy, microbiology and rheology. This enables objective analysis of properties such as ‘crunch’, ‘creaminess’, ‘lightness’ or ‘smoothness’. Understanding the science that underpins these attributes facilitates more intelligent and efficient product development, with reduced risk.”

The PHE guidelines refer to the use of sweeteners approved by the European Food Safety Authority as an alternative to sugar. There are many sugar replacement options available, both natural and artificial. However, food manufacturers need to be mindful that their use does not necessarily reduce overall calories. Sugar alternatives – broadly classified as bulk sweeteners or intense sweeteners – can reduce calorie count, but they are considered additives, so compromise clean label classification. Blueprinting provides a scientific framework for testing various approaches to the reduction or replacement of sugar, assessing how they impact attributes such as calorie count, sensory characteristics and shelf-life.

Leatherhead's blueprinting services are available to Leatherhead members and non-members. For more information email leatherhead@leatherheadfood.com

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About Leatherhead Food Research

Leatherhead Food Research provides expertise and support to the global food and drinks sector with practical solutions that cover all stages of a product's life cycle from consumer insight, ingredient innovation and sensory testing to food safety consultancy and global regulatory advice. Leatherhead operates a membership programme which represents a who's who of the global food and drinks industry. Supporting all members and clients, large or small, Leatherhead provides consultancy and advice, as well as training, market news, published reports and bespoke projects. Alongside member support and project work, our world-renowned experts deliver cutting-edge research in areas that drive long-term commercial benefit for the food and drinks industry.

Leatherhead Food Research is a trading name of Leatherhead Research Ltd, a Science Group (AIM:SAG) company. Science Group provides independent advisory and leading-edge product development services focused on the Group's in-depth science and technology capability. It has seven offices globally, two dedicated UK-based R&D innovation centres and more than 350 employees. Other Science Group companies include Oakland Innovation, OTM Consulting and Sagentia.

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