PAWSitively Natural Case Study: Nutritional analysis for new product development

Health-conscious consumers are demanding more information about what is in their food. Though safe ingredients in food and drink often include additives, preservatives and chemicals, a list of such ingredients is now more likely to put consumers off and food companies are challenged to create healthier products with longer shelf lives.

These consumers are not limited to humans; Chris Louttit, Founder and Director of PAWSitively Natural, has developed a new brand of nutritional and natural dog biscuits for dogs, particularly those with sensitive stomachs.

Through Interface, Ms Louttit approached Glasgow Caledonian University (GCU) to help her research the benefits of seaweed as a nutritional supplement for dogs, and also as a possible natural preservative for increased shelf life of her dog biscuit product range.

World class expertise in the microbiology, safety, chemistry and structure of food at Glasgow Caledonian University is regularly called on by corporate and public sector organisations.

Ms Louttit says: “I first approached Interface as I knew I needed academic assistance to assist me with the research required to develop the products and a brand that would be sustainable in the market place.

“The brand was created as a result of a personal pain point - a distinct lack of dog biscuits on the market suitable for my two rescue springer spaniels, that were free from meat and animal derivatives, derivatives of vegetable origin, and EC approved preservatives which can cause cancers in dogs. I was at this point baking my own dog biscuits so that I knew that what I was feeding them was safe.”

Ms Louttit worked with GCU’s Professor Kofi Aidoo to conduct nutritional analysis of the products and shelf life testing. The challenge was to establish if seaweed would act as a preservative alone, and if so whether it would provide a shelf life of at least six months for each of the four products. A programme of testing established a shelf life of 53 weeks, a first for natural food canine products, allowing Ms Louttit to begin commercial discussions for the launch of the PAWSitively Natural brand in Whole Foods stores and independent pet retailers. Her success has secured PAWSitively Natural on Business Gateway’s High Growth Programme.
The biscuits contain human food seaweed added to the recipe in granular form. It helps change the acidity in the dog’s mouth, thus helping to clean teeth. The seaweed also provides the dog with the daily requirement of micronutrients to keep them healthy. They are flourless, which helps with digestion.

Ms Louttit says: “It is important that we can demonstrate to consumers that our products have been scientifically tested, in accredited facilities, by experienced academics and experts in their field.”

Glasgow Caledonian is the only university in the UK to have a United Kingdom Accreditation Service (UKAS) accredited laboratory. Specialist equipment includes dedicated instrumentation which allows for the rapid detection and classification of bacteria relevant to food safety. The University’s food analysis services are used by many blue chip companies and SMEs which rely on effective and efficient sampling and analysis.

Within Glasgow Caledonian University’s School of Health and Life Sciences, research and consultancy projects span food microbiology and food safety, food chemistry and food structure, and the analysis of carbohydrates and starch. Recent consultancy projects include analysis of levels of preservatives such as sorbic acid and sulphur dioxide and microbiological evaluation of bacteria in samples of food. Significant work is undertaken in assisting food and drink companies extend the shelf life of their products through improvements to the factory production process advised by longer term microbiological analysis of samples.

In addition to consultancy work, the team provides professional courses in food safety for companies leading to certification from the Royal Environmental Health Institute of Scotland (REHIS).

Professors Kofi Aidoo and Richard Tester support small and medium sized enterprises (SMEs) with advice and analysis on nutrition and dietetics, shelf-life testing and food safety and hygiene. Research topics in the department include fungi and microbial toxins in food, food fermentations, food-borne pathogens, structure and functionality of carbohydrates, environmental effects on carbohydrate biosynthesis, and food and pharmaceutical applications of carbohydrates.

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At Glasgow Caledonian University, we work with industry and public sector partners to ensure our expertise responds to the need for real world innovation. GCU’s strategic business development and knowledge transfer teams work with academic experts in our Schools and Research Institutes to support businesses with a problem-solving approach.

Contact us to find out more about building a brighter future with GCU at www.gcu.ac.uk/business.