

# Sodium Reduction Case Study: Tortillas

## Summary

One of the UK's leading tortilla manufacturers reached out to Kudos Blends with the aim of reducing sodium in their products. Without the need for recipe reformulation, it was possible to drastically reduce sodium levels and maintain the same quality finished goods using one of our patented **KODA™** potassium bicarbonates.

We offer three grades with a particle size distribution developed specifically for the application. For tortillas and this case study, **KODA™ 50** was used. This grade of **KODA™** is best used in dough-based products to ensure full solubility and prevent any bicarbonate 'spotting'.

## What **KODA™ 50** Can Do for You

- Reduce sodium in tortillas by up to 20% without compromising end-product texture and shape.
- Provide the same colour profile, blistering and rollability that customers expect.
- Provide a tortilla dough that is suitable for both tortilla presses and cutting.
- Replace sodium with the essential mineral potassium to improve the nutritional profile.

Our **KODA™** technology is also available for applications such as cakes, cookies, crackers, crumpets, muffins, pancakes, doughnuts,

premises and many more. To find out more about how to improve the nutritional profile of your baked goods, contact our experts.

## Background

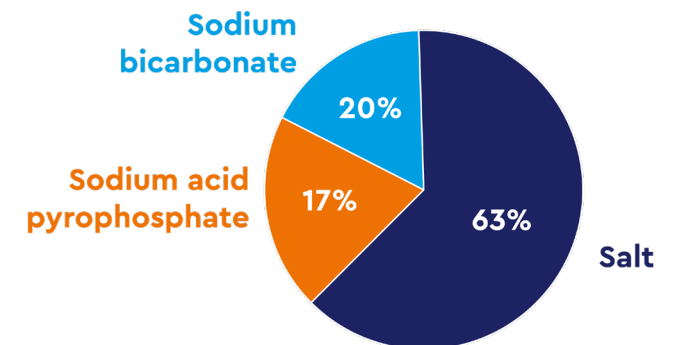
The tortilla market in the UK and Europe is on a steady rise, with a projected growth rate of 5.22% by 2028, with companies launching new products to meet demand and customer preferences. Among these, wheat-flour-based tortillas sit at the top as the best seller.

Wheat-based tortillas, a staple in many diets, are notoriously high in sodium in order to stay soft and supple over their shelf-life. Surprisingly, they can contain up to 27% of a person's daily required sodium intake, before a filling is even added. This means that a single-filled wheat tortilla could nearly max out a person's daily sodium allowance.

## Challenge

Historically, a high level of salt was required to enhance shelf-life by discouraging microbial growth and dry-staling. Salt is also critical in maintaining the flavour profile and textural properties of the tortilla. It acts to strengthen gluten bonding, increasing the tortilla's robustness and rollability. Removing salt adversely impacts taste and longevity, meaning that the focus has to be shifted to reducing sodium from other sources.

### Sources of Sodium in Tortillas



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## Solution

Our patented **KODA™** potassium bicarbonate technology provides consistently impressive end-product results, with the physical characteristics, flavour and handleability that customers expect. When used in combination with a leavening acid, it grants the ability to dramatically reduce sodium and supplement it with potassium, an essential mineral.

### Tortillas Made Using Different Bicarbonate Sources

Standard baking powder



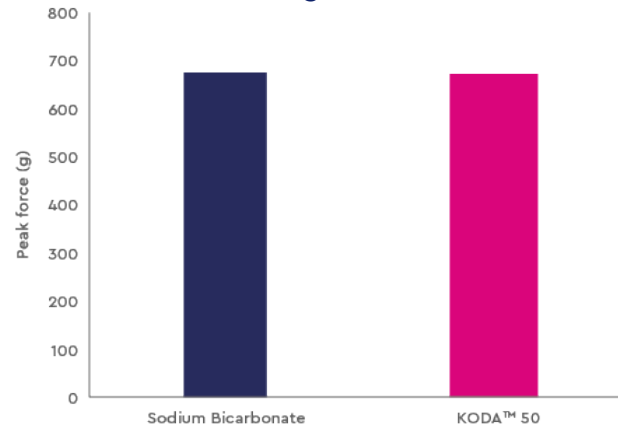
381/100g of sodium

**KODA™ 50**  
Potassium Bicarbonate



306/100g of sodium

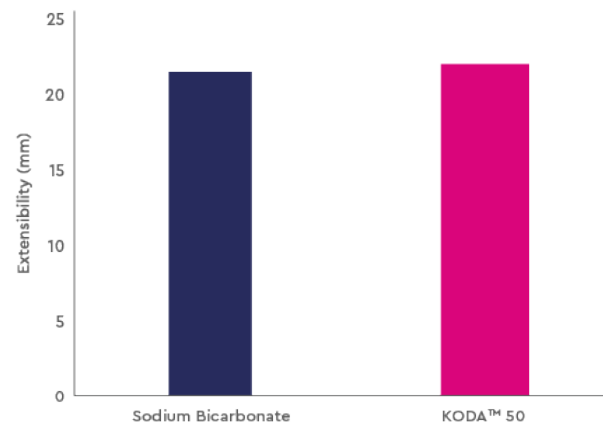
## Toughness



Measured using a TA.XT plus C texture analyser according to AIB bakery standards.

The higher the bar, the tougher the product.

## Extensibility



Measured using a TA.XT plus C texture analyser according to AIB bakery standards.

The higher the bar, the more extensible the product.

Replacing the sodium bicarbonate with **KODA™ 50** resulted in tortillas that were a match to the control both visually and texturally, providing the consumer with the same end product characteristics, as well as a sizable reduction in sodium.

**KODA™** is available in both complete baking powders, or as an individual ingredient and comes in three patented grades that are suitable for a wide range of bakery applications.

## Get In Touch

Our expertise has been developed through years of bakery industry experience combined with in-depth scientific knowledge of leavening agent chemistry.

Our team of highly skilled chemists and bakers are always on hand to support our customers in finding the right solution for their bakery projects.

Contact us at:

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