

Sodium Reduction Case Study: Crumpets

Summary

One of the UK's leading crumpet manufacturers sought help from Kudos Blends to reduce sodium in their finished goods. By making a simple switch to **PELL™ Krumpet** it was possible to drastically reduce sodium levels and maintain the same quality finished good without any recipe reformulation.

What **PELL™ Krumpet** Can Do for You

- Reduce sodium in crumpets by up to 34% without compromising end-product texture and shape.
- Give the same rise and signature tunnelled aesthetic that consumers expect.
- Retain taste by removing sodium from the baking powder instead of removing recipe salt.

Our patented sodium reducing **PELL™ K** and **KODA™** technology is also available for applications such as cakes, cookies, crackers, tortillas, muffins, pancakes, doughnuts, premixes and many more.

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

Background

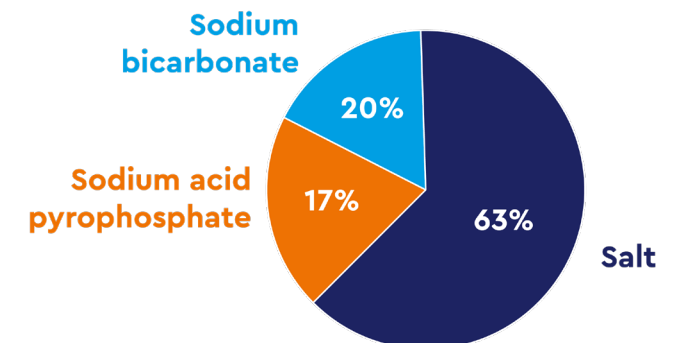
One of the main contributors of salt in an average diet is from the broad range of goods that fall under the bread category. As well as bread and rolls, this category also includes morning goods such as English muffins, hot cross buns and crumpets.

Crumpets are a beloved breakfast staple, which has been scrutinised for their sodium content levels in light of public health goals and consumer dietary preferences. The target set for 2024 by Public Health England is to achieve a maximum salt level of 1.19g of salt per 100g or 475g of sodium in the final product. This leaves manufacturers needing to reformulate their recipes to meet these targets, ideally without compromising their well-known and well-loved product.

Challenge

Salt (sodium chloride) in crumpets has a tremendous impact on many end-product traits, as well as influence over industrial processing properties. Taste is the primary functional purpose behind salt addition; yeast and flour otherwise become the predominant flavours and the product becomes unpalatable. It also serves to assist and strengthen gluten formation, which is essential for the unique tunnelled texture of the crumpets themselves. Salt also acts to slow yeast fermentation, which aids with process tolerance. As such, it is necessary to tackle sodium reduction through other sodium sources in order to avoid undesirable end-products.

Sources of Sodium in Crumpets



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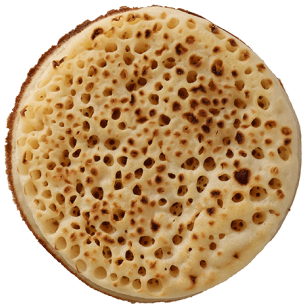
Solution

As a component of **PELL™ Krumpet**, our patented **KODA™** potassium bicarbonate technology provides consistently impressive end-product results, with the physical characteristics, flavour and handleability that customers expect; all with a significant sodium reduction.

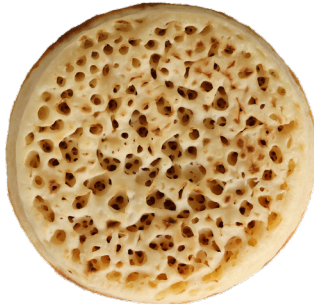
Crumpets Made Using Different Bicarbonate Sources

Standard baking powder

PELL™ Krumpet

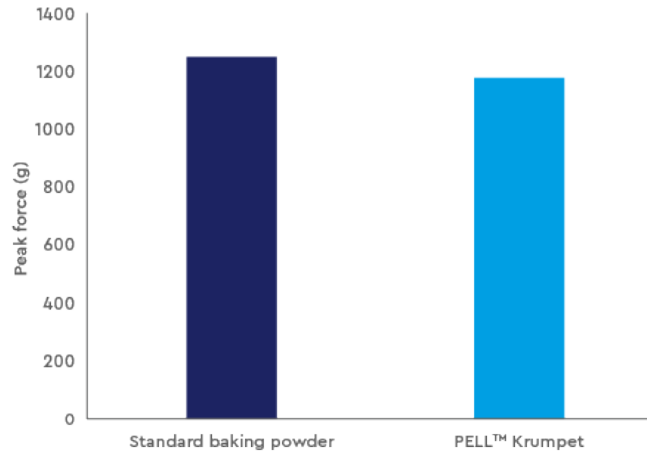


472/100g of sodium



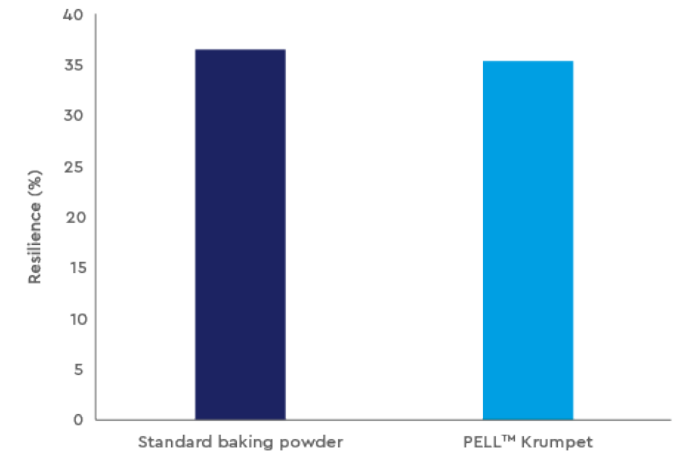
310/100g of sodium

Hardness



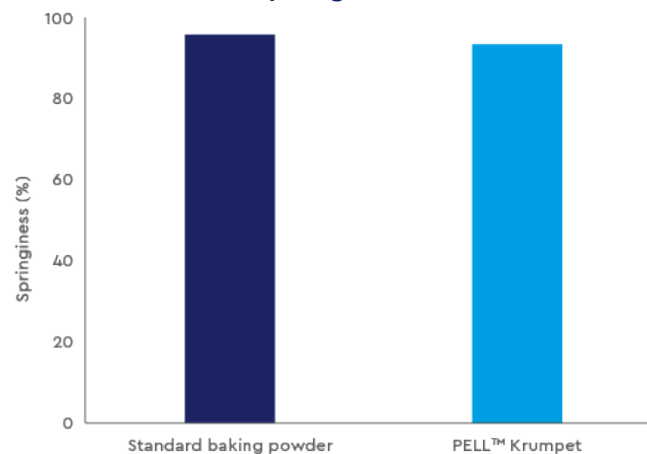
Measured using a TA.XT plus C texture analyser according to AIB bakery standards.

Resilience



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

Springiness



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

Hardness, resilience and springiness were all statistically identical. As seen in the figures and images above, **KODA™** can provide delicious, aesthetically consistent crumpets every time.

KODA™ is available as a standalone product and as a part of our range of **PELL™ K** low sodium range. Our **PELL™ K** baking powders typically incorporate **KODA™ 100** technology; perfect for industrial bakeries. For leavening that requires more specialised characteristics, we offer products with a range of particle sizes specifically designed to suit all applications.