

Produce Soft, Flexible and Long-Lasting Wheat Tortillas

Case Study

Summary

A common challenge faced in the industrial production of wheat tortillas is their limited shelf-life. This arises from issues such as dry-staling, which reduces product softness and rollability, or because of mould growth. Additionally, tortillas often stick together after prolonged storage in their packs, causing tearing when consumers try to peel them apart therefore presenting a frustrating experience. Improving upon all of these tortilla features can be as straightforward as changing to our **ZEUS™ A20** baking powder.

What **ZEUS™ A20** Can Do For You

- Provide a softer, fluffier tortilla texture.
- Grant greater extensibility, allowing easier rolling with no cracks or breaks.
- Reliably produce pH reduction that more than doubles the active preservative and increase shelf-life.
- Prevent tortillas sticking and tearing after storage.

Our shelf-life extending **ZEUS™ A20** technology is also available for applications such as cakes, doughnuts, pancakes, waffles, and many more.

To find out more about novel **ZEUS™** baking powders, contact our experts.

Background

The tortilla market has emerged as one of the fastest-growing bakery sectors in recent years with an annual growth rate of around 8% in Europe. In North America, they are the second highest selling bakery item trailing only behind white pan bread. Originally made from maize, the evolution of tortillas has seen wheat tortillas take dominance, making up the vast majority (89%) of all new global tortilla product launches outside of Latin America.

Wheat tortillas have become a staple in many households, gaining widespread popularity due to their versatility and taste. Their thin, flatbread structure makes them an ideal vessel for an array of fillings, ranging from savoury to sweet. The convenience and adaptability of wheat tortillas have contributed to their adoption in different cultures, making them a preferred choice for wraps, burritos and sandwiches.

Challenge

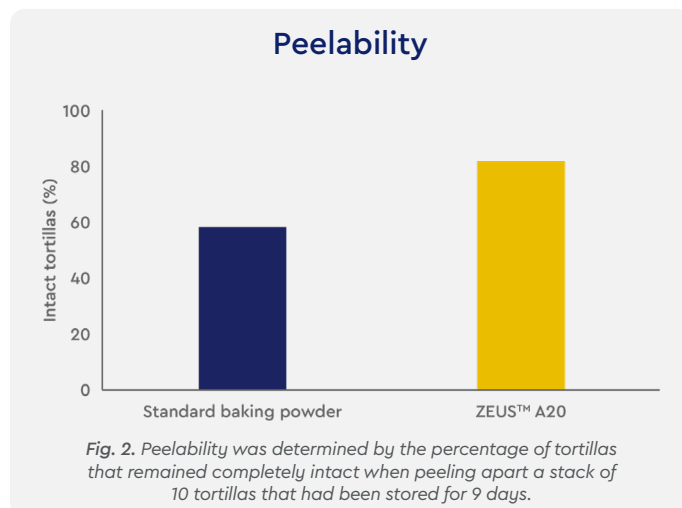
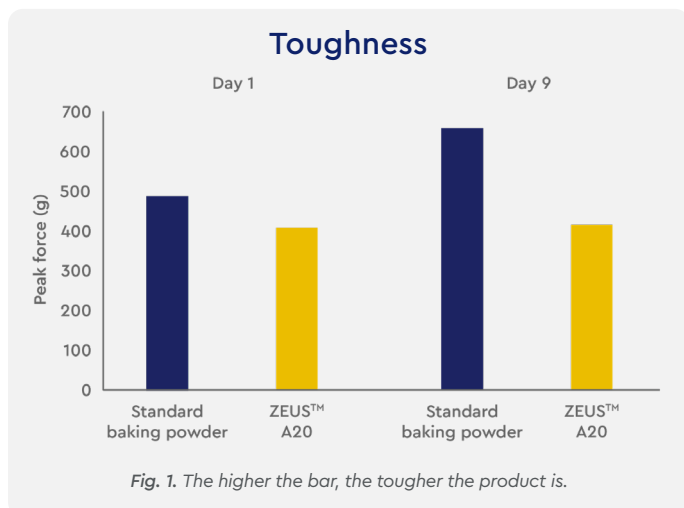
Typically, tortillas suffer from a very limited shelf-life. Their usability, particularly once the packaging has been opened, can diminish rapidly. Attempts to solve these problems usually involve complex processing conditions and added ingredients, such as encapsulated acids, enzymes, emulsifiers, gums or additional fats. With the growing consumer demand for healthier products and cleaner ingredient lists, as well as a desire to avoid excessive raw material costs, tortilla manufacturers are seeking alternative solutions.

Solution

The **ZEUS™** range of baking powders is the latest innovation by the chemistry and bakery experts at Kudos Blends. They combine traditional bakery concepts with our novel technologies to enhance bakery end-products. Utilising a groundbreaking new leavening technology **ZEUS™** baking powders, such as **ZEUS™ A20**, make it possible to provide controlled gas release, overcome pH buffering and increase water binding to improve product quality and shelf-life.

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To demonstrate the benefits, Kudos Blends' in-house bakers trialled wheat tortillas made with standard baking powder against tortillas made with a **ZEUS™ A20**, following an industrial recipe and using a heated tortilla press and electric hotplate to replicate commercial bakery processes. Samples were then assessed for pH, toughness and peelability in the analysis suite.



Analysis showed that tortillas made with the **ZEUS™ A20** were softer and more extensible than those made with a standard baking powder. This result was assessed both subjectively by a panel of sensory analysts, as well as objectively using a texture analyser.

Over time, the standard tortillas became tougher and less flexible, while **ZEUS™ A20** tortillas remained soft and pliable. Following the simulation of product packaging and storage over time, the tortillas were much easier to roll without cracking and did not tear when separated from each other.

On top of these beneficial physical properties, the end-product pH was reduced from 6.47 to 6.11 which, as shown below, more than doubles the active preservative and considerably increases shelf-life, reducing the time pressures involved in the manufacturing and transportation of finished goods, and consequently minimising product wastage.

The popularity of wheat tortillas is increasing, and **ZEUS™** has the ability to solve your manufacturing process challenges. With our rigorous in-house application testing, we ensure that our leavening systems are right for your products.

Get In Touch

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

Contact us at: info@kudosblends.com or +44 (0)1299 271 333.

