



TORTILLAS ARE ON A ROLL

KEEP THEM FRESH

Today's consumers love tortillas—especially when they taste fresh, are soft and flexible, roll easily—and have clean labels.

CONSUMERS AND TORTILLAS

93.8 MILLION CONSUMERS

buy tortilla products on a **weekly** basis¹

122.5 MILLION PEOPLE

in the U.S. consume **one to eight or more bags** of tortilla products per month¹

CONSUMERS AND CLEAN LABELS

Consumers surveyed said that a **clean label** is a “very important” label claim²

Consumers consider tortillas **label-friendly** since they contain **recognizable ingredients**³

As tortillas continue to trend upward, **brands that provide fresh, flexible tortillas with clean labels** will win consumers.

Clean label products with **recognizable ingredients**

Soft, flexible tortillas
= less waste

TORTILLAS ARE A FAVORITE GO-TO ITEM AND A STAPLE IN DAILY MEAL PLANNING, BECAUSE OF THEIR VERSATILITY AND EASE OF PREPARATION.

¹ “Tortilla Consumer Purchase Trends & Frequency” report, 02/01/2019, askwonder.com

² Free-From Foods, U.S., Mintel, June 2019

³ <http://expertise.foodinsiderjournal.com/files/pdfs/craving-the-crunch.pdf>

THE GOAL

Soft and moist, pliable corn and flour tortillas throughout their shelf life, with label-friendly ingredients

TRIED-AND-TRUE TORTILLAS

IMPROVING PRODUCTION QUALITY, REDUCING WASTE AND EXTENDING SHELF LIFE IN CORN AND FLOUR TORTILLAS

THE CHALLENGE

Retrogradation (aka staling) is a major concern for corn and flour tortillas, resulting in

- Hardness
- Loss of freshness/softness
- Breakage due to loss of foldability

Bakery scientists use enzymes and gums as their main tools to **improve machinability and production quality, in order to reduce waste**. Beyond the bakery manufacturing plant, **enzymes combat staling and finished product quality degradation over time, to extend shelf life**. The perfectly balanced combination of enzymes helps maintain the desirable eating characteristics of **soft and moist, yet pliable tortillas**.

THE PROCESS

Since enzymes are very specific in terms of their activity and dosage—and the short amount of baking time required for tortillas gives little time for enzymes to do their work—it's paramount to find the perfect enzyme in the correct dosage.

At our **Customer Laboratory Services (CLS)** facility, our team used different types of enzymes based on:

- thermal stability
- optimal dosage levels
- amount of activity required during and post baking

We screened several enzymes and optimized final blends and dosage levels, using a Design of Experiments (DOE) approach, to ensure accurate performance of enzyme/s in the product throughout the entire shelf-life period. Our solutions provide the appropriate dosage of enzymes—without overdosing.



THE FRESHER, SAFER, LONGER EXPERTS

THE RESULT

TillaZyme™ and TillaSoft™ help extend the shelf life of tortillas, improving their qualities throughout distribution and all the way to consumer consumption.

TillaZyme™ and TillaSoft™ help retain moisture and interfere with the retrogradation process, a key contributor to staling.



THE FRESHER, SAFER, LONGER EXPERTS

THE SOLUTION



Kemin enzyme and gum blends reduce the rate of staling that naturally occurs through moisture loss over time or due to starch retrogradation. Our products help in minimizing staling, to produce a softer product with moistness, improved flexibility, and no breaking or drying. The tortilla product is shelf stable for a longer period, resulting in lower wastage and improved distribution.

INGREDIENTS

- ▶ TillaZyme™ enzyme gum blends for corn tortillas
- ▶ TillaSoft™ dough conditioners and tortilla softeners for flour tortillas

KEMIN TEAM

YOUR PARTNERS IN SUCCESSFUL TORTILLA SOLUTIONS

Kemin can help tortilla manufacturers with a customizable suite of functional ingredients, technical expertise, production experience and value-added services.

We understand tortilla formulation, shelf life and operational challenges, from lab bench to store shelf. Our team helps protect tortilla brands and assists in accelerating their new products' speed-to-market.

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