

A GLASS OF TIGERNUT MILK & COOKIES

THE CHUFA CO. COMES TO FIRST TO HELP EXTEND THE LIFE OF THEIR FRESH-THINKING MILK ALTERNATIVE

SHELF-LIFE TESTING

PROJECT ESSENTIALS

Principal Investigator:
Robert McCurdy
Years Active: 2015 - 2016
Students:
Alison Smithers
Campus: St. James

Support from:
Industrial Research Assistance Program (IRAP)

Industry Partners:
The Chufa Co.

Modern consumers are on the lookout for healthy alternatives to old favorites—take the once-familiar wholesome glass of milk. Between the rise in health food awareness, lactose intolerances, and eco-minded thinking, dairy-free alternatives to this once-classic staple are rising in popularity, including soy, coconut, almond and other nut milks. One milk substitute flying under the radar is the version produced by the tigernut, or “chufa”. Founders of The Chufa Co., Andrea Orazi and Scott Abraham had developed their own method and process for tigernut milk in their home kitchen, and wanted to explore turning their homemade treat into a commercial product.

Those with allergies, don’t be fooled by the name—the tigernut is not actually a nut at all, but a root vegetable: a starchy tuber that is a high source of prebiotic fiber, healthful fats, proteins and natural sugars. Tigernuts are traded around the world, but typically found in Africa and Europe and traditionally enjoyed as a refreshing beverage in Spain. For years, Africans and Spaniards have been turning this staple into a milk alternative by soaking the raw

nut, blending with water and straining through cheese cloth.

But The Chufa Co. had one clear challenge: extending the shelf life of their delicious Tigernut Drink. Its current shelf life sat somewhere around two to three days—more than enough time for them to enjoy a batch in their home, but nowhere near the industry standard for such a product.

They came to FIRST to help navigate this barrier to market, while optimizing their current formulation and improving the product appearance and texture. The research team, led by Senior Research Food Scientist Robert McCurdy, quickly discovered the product had a low acidity level and a high pH—which in turn was affecting the shelf life stability.

After testing different stages of the product batches as well as the raw materials, the team gathered more information about the development process. By using a combination of different hydrating times, blanching methods, sorting methods and a product comparison, FIRST

was able to successfully extend the shelf life of the Tigernut Drink.

“I learned a great deal on how important the quality of raw material was,” says Alison Smithers, a student on the project. “[We had to] always be aware of the amount of Tigernuts that were being used, the size, color and texture, as well the amount of time the nuts were being rehydrated and blanched each batch, for each test.”

As an additional project phase, the FIRST team also worked with Andrea and Scott to develop four unique flavour profiles: Origina, Horchata, Maple and Coffee & Cacao. In the end, the team recommended a development process that stayed close to the initial processing method developed by Andrea and Scott. By rehydrating the Tigernuts and ensuing the removal of small and damaged Tigernuts in a new improved selection process, the Tigernut Drink shelf life grew from a handful of days to a 10-day shelf life. Get your cookies ready—this healthy milk alternative is in six retailers to date and landing on a store shelf near you soon.