

How storing tiger nuts at different temperatures can change their milk quality

Original Title: Storage temperature of tiger nuts (Cyperus esculentus L) affects enzyme activity, proximate composition and properties of lactic acid fermented tiger nut milk derived thereof.

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Abstract: This study investigates how different storage temperatures affect the nutrients, enzymes, and fermentation of tiger nuts and their milk. Refrigerating tiger nuts increases certain enzyme activities but lowers sugar content, while storing them at warmer temperatures increases sugars but decreases fats. When tiger nuts are stored at warmer temperatures, their milk ferments faster and develops a sweeter and sourer taste, offering potential for quicker and more flavorful production of tiger nut milk.

Gap addressed: While tiger nuts are widely used for producing milk and other products, little is known about how their storage conditions affect their nutritional content and the quality of products made from them. This study fills that gap by exploring how different storage temperatures impact the composition and fermentation of tiger nut milk, providing insights that could help optimize storage and processing methods.

Sector/Industry focus: The food and beverage industry, especially manufacturers of plant-based milks and fermented products, could benefit from these findings. By understanding how storage conditions affect tiger nuts, producers can better control the quality and taste of tiger nut milk, a popular dairy alternative.

Potential uptake or practical application:

The study suggests that storing tiger nuts at ambient or elevated temperatures before fermentation could speed up the production process and create a product with a desirable sweet and sour flavor. This can be particularly useful for companies looking to reduce production times and enhance the sensory appeal of their tiger nut milk products.

Key recommendations:

Industry practitioners should consider storing tiger nuts at ambient or warmer temperatures to enhance the fermentation process and flavor profile of tiger nut milk. Further research should explore the precise mechanisms driving these changes and the long-term effects on product quality. Collaborating with food scientists and technologists can help optimize storage and fermentation practices for consistent, high-quality production.

Online link

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