

# Shining a light on the use of light-emitting diodes in the food industry

November 19 2015

---

Light-emitting diodes (LEDs) are everywhere, from car headlights to cell phones and ultra-thin screen TVs. Now LEDs are being used in the food industry. In a new review article from *Comprehensive Reviews in Food Science and Food Safety*, published by the Institute of Food Technologists (IFT), researchers from the National University of Singapore (NUS) and the Agri-food and Veterinary Authority (AVA) of Singapore reviewed the advantages of LED technology over conventional lighting, and showed how LEDs are the most suitable light source to prevent food spoilage, inactivate pathogens and improve nutrition.

LEDs are able to either delay or accelerate the ripening of certain fruits and help prevent [food spoilage](#). In addition, LEDs can efficiently inactivate harmful foodborne pathogens. This is desirable especially since it is a nonthermal means (without heat), and results in a lower risk of antimicrobial-resistant strains being formed. In postharvest applications, LEDs not only delay deterioration, but also improve nutritional content.

Although the effectiveness of LEDs, has been shown to generally improve or retain the quality of foods, few studies have evaluated consumers' acceptability of LED treated food. The authors of the review article highlight this as an area where more research and education is needed.

**More information:** Craig D'Souza et al. Application of Light-Emitting

Diodes in Food Production, Postharvest Preservation, and Microbiological Food Safety, *Comprehensive Reviews in Food Science and Food Safety* (2015). [DOI: 10.1111/1541-4337.12155](https://doi.org/10.1111/1541-4337.12155)

Provided by Institute of Food Technologists

Citation: Shining a light on the use of light-emitting diodes in the food industry (2015, November 19) retrieved 8 August 2024 from <https://phys.org/news/2015-11-light-emitting-diodes-food-industry.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.