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EcoLoc Uses UVC Light To Extend Everyday Fridge Freshness

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EcoLoc is a home food-storage system featuring a compact battery-powered UVC module that nests into a custom glass lid. Developed with technology from Nanyang Technological University and PureFize Technologies, the lid is designed to fit Ikea's existing 365+ food containers, turning them into active preservation vessels. The chip inside the module emits short-wave ultraviolet light without mercury, using a cathodoluminescence process to generate germicidal UVC along with limited UVA and UVB.

In use, consumers briefly activate the EcoLoc when loading food, with an integrated timer automatically shutting the light off after a few minutes. Users can repeat the cycle daily to curb bacterial growth on surfaces like produce and baked goods. Laboratory testing showed strong reductions in harmful bacteria, including *E. coli*, while extending the chilled life of tomatoes, buns, and blueberries by up to several weeks.

EcoLoc matters for consumers seeking to cut food waste and make better use of weekly grocery hauls. By layering active sanitation onto familiar glass containers, it offers a practical path to fresher leftovers without changing fridge layouts or routines. The system also reflects a broader shift toward countertop and in-fridge accessories that apply lab-grade disinfection science to everyday home storage.

Trend Themes

1. **Uvc-infused Kitchenware** - Integrating UVC technology into everyday kitchenware paves the way for advanced food sanitation solutions right at home.
2. **Sustainable Food Preservation** - Eco-friendly food storage solutions are gaining traction as consumers look to reduce waste and maximize grocery shelf life.
3. **Smart Home Sanitation** - The rise of intelligent cleaning devices that merge technology with household routines is reshaping how consumers approach cleanliness.

Industry Implications

1. **Home Appliance** - With smart upgrades integrating advanced disinfection, the home appliance sector bolsters opportunities for health-focused innovations.
2. **Packaging Technology** - The revolution in packaging technologies emphasizes eco-conscious solutions that actively protect food quality and safety.
3. **Low-impact Consumer Goods** - Products that combine technology and sustainability are transforming the landscape of consumer goods to enhance everyday living while reducing environmental impact.

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