

## Food Applications

Food Category	Traditional Preservatives Used	Traditional Limitations	L 44 F Benefits	Shelf-Life Extension
Fresh Fruits & Vegetables	Wax coatings, calcium chloride, synthetic antioxidants	Chemical residues, limited effectiveness	Non-Toxic, residue-free, Antioxidant activity	2x extension
Cut Fruits & Vegetables	Ascorbic acid, citric acid, sulfites	Short-term protection, allergen concerns	Dual Antimicrobial & Antioxidant action	2x extension
Leafy Greens & Herbs	Chlorine washes, modified atmosphere	Limited microbial control, quality degradation	Preserve Freshness and texture	2x extension
Dates	Sulfur dioxide, sorbates	Allergenic, affects taste	Natural preservation, No Physicochemical action	3-5x extension
Poultry	Chlorine dioxide, peracetic acid, Antibiotics	Harsh chemicals, limited effectiveness	Antibacterial & Anti-viral activity, prevents and cures diseases	2x extension
Aquaculture	Antibiotics, chemical preservatives	Resistance issues, regulatory concerns	Natural antimicrobial protection, Promotes growth	2x extension
Dairy Products	Nisin, natamycin, sorbates	Limited spectrum, stability issues	Antimicrobial activity, Preserves Lactic Acid Bacteria	8 days extension
Ready-to-Eat Foods	Multiple synthetic preservatives	Complex formulations, Health Hazards	Organic molecular action, clean label product	2x extension