

Natural antibacterial materials for delaying *Kimchi* fermentation

Technology Overview

- Kimchi was selected as a top 10 health food in Korean traditional food.
- But it has trouble for export because of over-ripeness and package expansion by fermentation process. So we studied technologies which **control (1) Kimchi fermentation using *Lactic acid bacteria* (LAB, antibacterial) isolated from Kimchi** and **(2) activation of CO₂ absorption in package during various distribution environment.**

Core Technologies

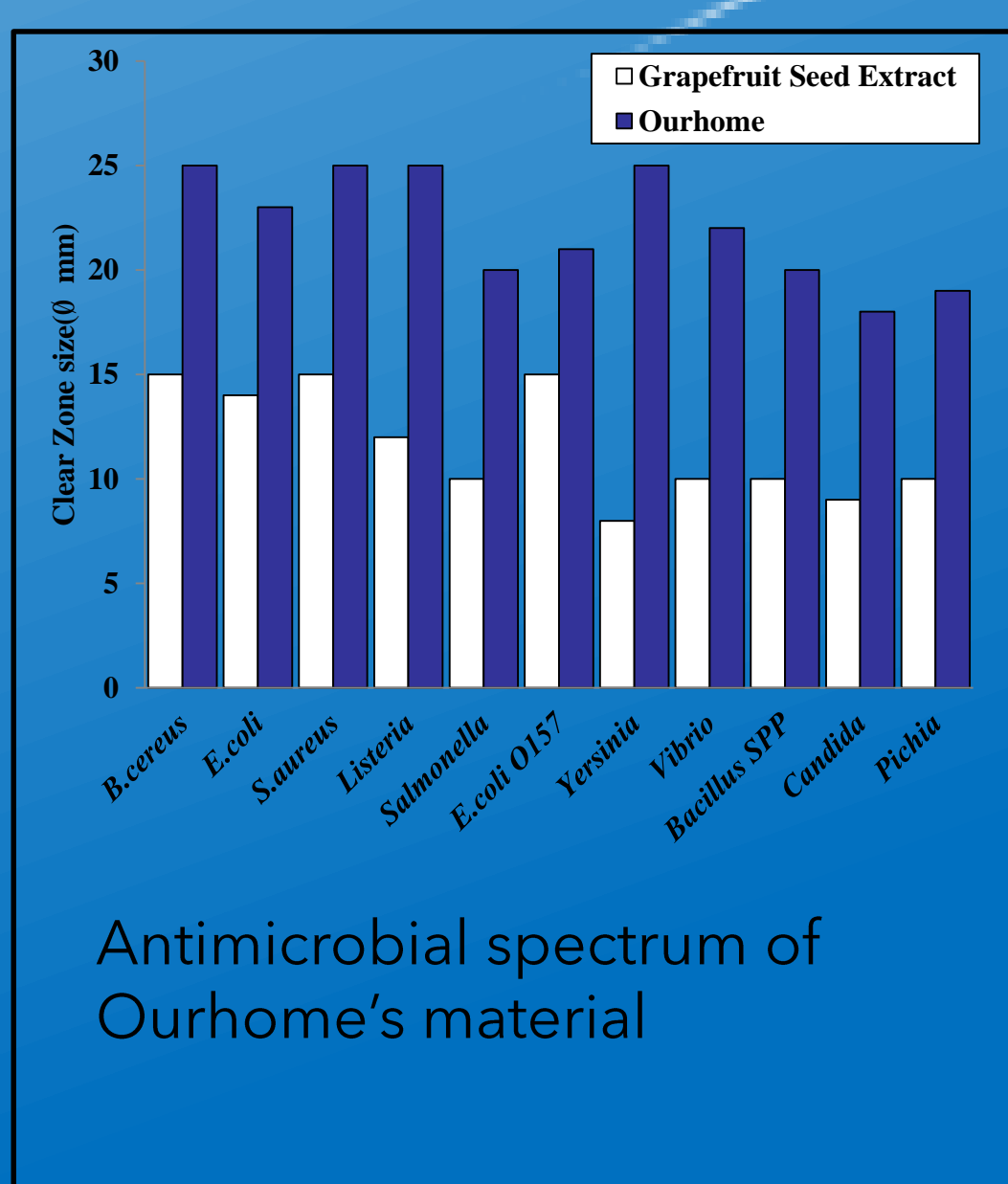
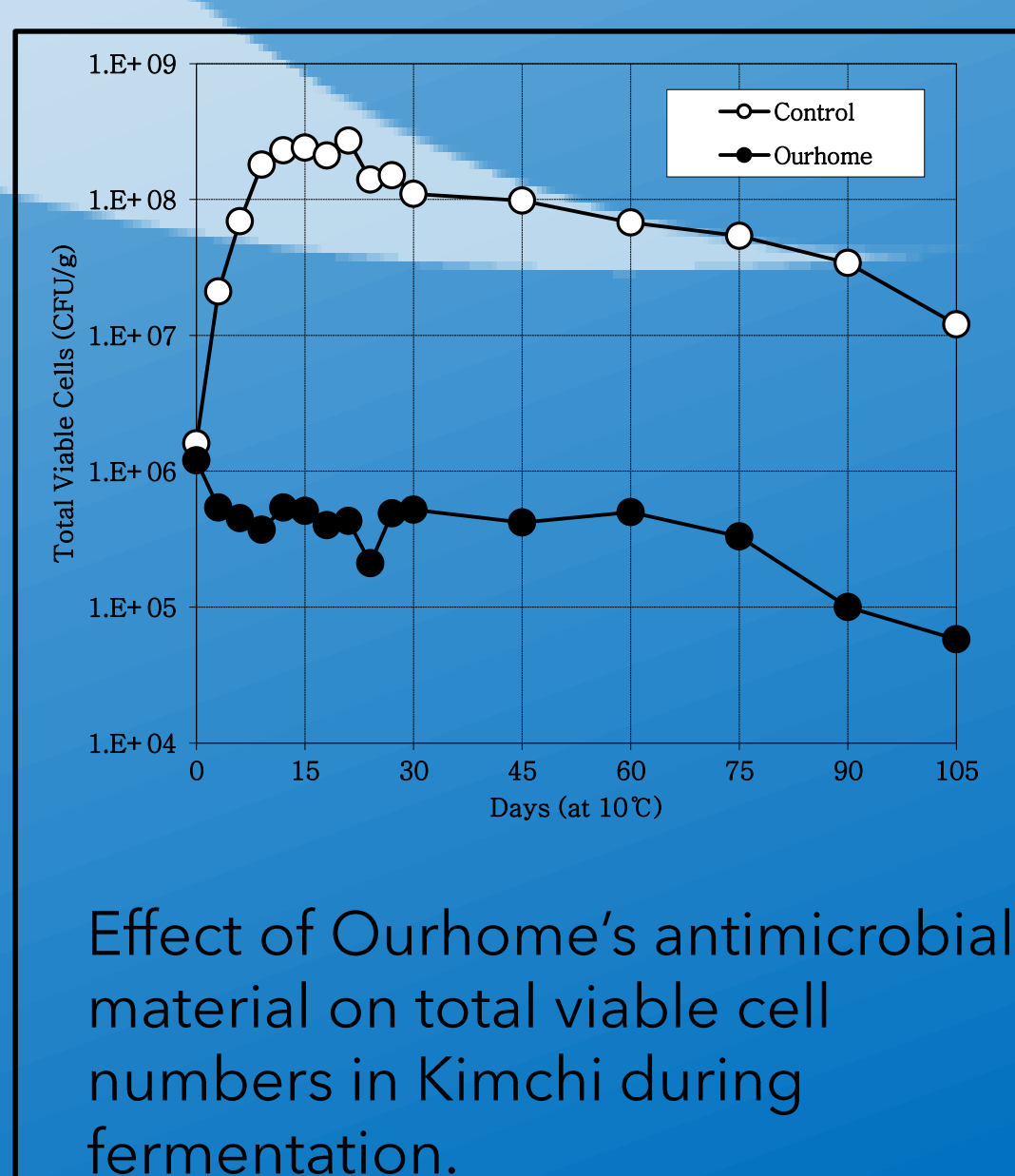
- Develop antibacterial substance mixed 6 kinds of LAB which produce bacteriocin
- Develop pouch for fermented food using selective transmitting film and D.I.L (Die-cut & Insert & Labeling) automatic process

Application Area and Advantages


- Extend shelf-life of fermented and low-sodium food
- Secure of microorganism safety in non-thermal food

Accomplishments


- Paper
 - Identification of an anti-listerial domain from *Pediococcus pentosaceus* T1 derived from Kimchi, a traditional fermented vegetable, Food Control, Volume 43, 2014, Pages 42-48
 - The Culture Broth of *Pediococcus pentosaceus* T1 Inhibits *Listeria* Proliferation in Salmon Fillets and Controls Maturation of Kimchi, Food Technology and Biotechnology, 2015



Original




PAACS



Application of micro-perforated film

- Prevent contamination of Sachet from Kimchi
- Selective transmit of CO₂

Original



PAACS

