Method to Improve Effectiveness of Antimicrobial Essential Oils

Title: Essential Oil Microemulsions as Antimicrobial Sanitizers for Produce

Invention: The invention is a microemulsion technology to reduce the surface tension of oil in water. This microemulsion technology can improve the coating on the surface of produce, therefore increasing antimicrobial activity.

Background: Plant essential oils are known to improve antimicrobial activity and are an excellent option for post-harvest treatment without the use of chemicals. Unfortunately, when water is present, these oils do not mix well and will reduce antimicrobial activity. To combat this, researchers at the University of Arizona developed this technology to promote microemulsion of oil droplets that are stable in water.

Applications:

- Organic antimicrobial plant wash for produce

Advantages:

- Provides more stability than chemical sanitizers
- Increased biodegradability
- Increased antimicrobial activity, which requires less treatment and increases savings

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