

Acerola Extract

Clean Label Conference
March 28-29, 2017



CLEAN LABEL CONFERENCE



Modes of Failure for Meat and Poultry

- **Color**

- Consumers view color as the determining factor in the quality of fresh meat



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- **Microbial Challenges**

- RTE and fresh meat is very susceptible to growth of spoilage and pathogenic bacteria

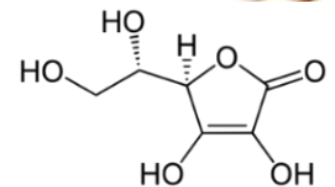


Acerola Cherry Extract

Active Ingredient: Ascorbic Acid

1. Protects color
2. Synthetic cure accelerator alternative
3. Food safety benefits

Acerola



Fresh Meat Color Protection

1. Meat products are susceptible to photo-oxidation
 - Photochemical reaction between light and fat lipids
 - Refrigerated display cases are primary cause



BR-2014-00112

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2. Non-meat ingredients
 - Pyruvic acid & enzyme activity in onion, garlic, chives, jalapenos, peppers, etc., can also play a role in the discoloration of meat products



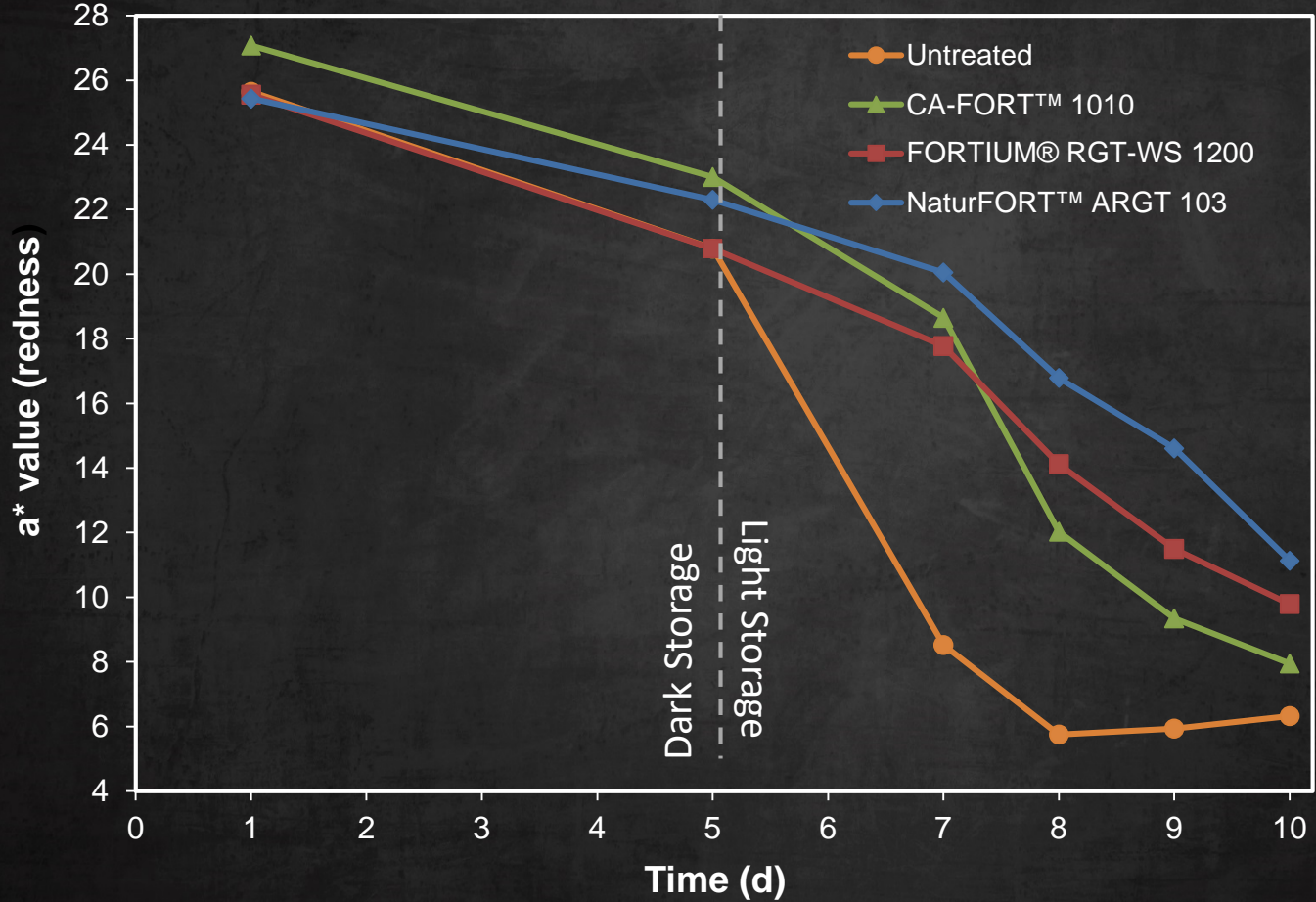
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Color Extension of Raw, Ground Beef

- Color loss due to
 - Oxidation of Oxymyoglobin to Metmyoglobin
 - Microbial load
- Hi-OX MAP
 - Lipid oxidation encouraged due to high oxygen content
- Lighted retail display accelerated color loss



Color Extension of Raw, Ground Beef



Cured Meats

Meat products where sodium nitrite is added for food safety and the generation of characteristic cured, pink color.

- Ham
- Bacon
- Hot dogs



Acerola Function in Cured Meats

- Replacement of synthetic cure accelerators
 - Ascorbate
 - Erythorbate
- Commonly used with alternative nitrite sources
 - Celery Powder
- Strong reducing agent
 - Increases rate of nitric oxide conversion from a nitrite source
 - Color stability over shelf life
 - Reduced hold times before thermal processing



Acerola & Food Safety

- May increase safety against *Clostridium perfringens* outgrowth during cooling when used in conjunction with a nitrite/nitrate source.
- Relevant for large diameter products
 - Bone-in hams
 - Deli-slicing logs



Acerola Extract Solutions

- Fresh Meat Color
 - NaturFORT™ Blends (liquid & dry)
- Synthetic Cure Accelerator Alternative
 - FORTIUM® A



Questions?

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