



## REVOLUTIONARY PACKAGING TECHNOLOGIES | DoD CFD

Revolutionary packaging technologies will be incorporated into current and future ration systems to improve material properties, to validate/protect the food supply, to increase survival rates and to improve overall ration quality.

### WHY IS IT NEEDED?

Combat rations will require innovative material and packaging technologies to provide improved shelf life, logistics, quality and safety to the Warfighter.



### TECHNOLOGIES:

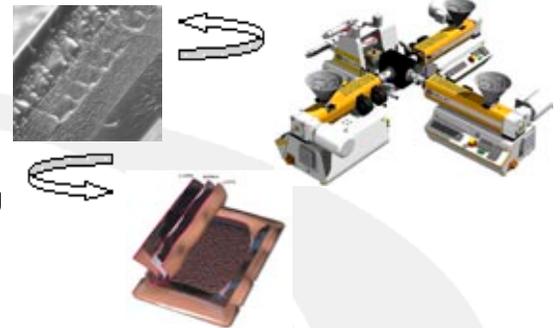
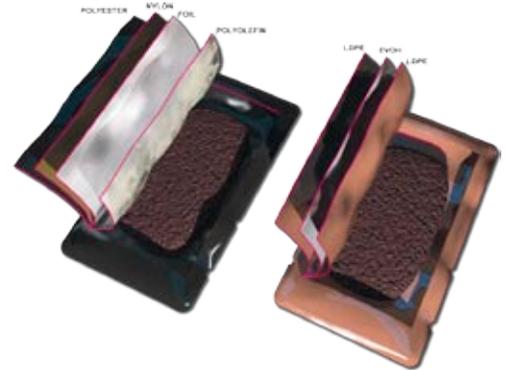
**Nanotechnology in Packaging...**the incorporation of nanoparticles into packaging films for improved barrier, mechanical, and thermal properties.

**Dynamic Packaging...**embedded antioxidants and odor/aldehyde-scavenging materials for packaging films to reduce off-odors/flavors and rancidity.

**Tamper Evident Packaging...**mechanical and/or RFID-based sensor technologies to provide protection against bioterrorism and product tampering.

**Shelf Life Prediction (or Barrier Performance Prediction)...**mathematical model for calculating permeability properties of packaging materials utilizing multiple high barrier technologies (i.e. nanotechnology, barrier coatings, oxygen scavengers).

**Ration Packaging Reconfiguration...**alternative packing technologies (e.g. aerogels, airliner) to increase survival rates in worst case scenarios such as airdrop.



### KEY FEATURES/BENEFITS:

These technologies will benefit all current and future ration packaging systems with:

- Reduced solid waste
- Lighter weight and cube
- Enhanced package survivability
- Increased quality, acceptance and shelf life
- Capability to tailor to mission needs
- Improved food safety and security



### POINT OF CONTACT:

#### Combat Feeding

Phone: COMM (508) 233-4670, DSN 256-4670

E-Mail: nati-amsrd-nsc-ad-b@conus.army.mil

