

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND

Natick Soldier Research, Development and Engineering Center

Overview

- NSRDEC focuses on the Soldier domain and incorporates the latest innovations to maximize the Warfighter's survivability, sustainability, mobility, combat effectiveness and field quality of life.
- NSRDEC continues to empower, unburden and protect Warfighters through basic science, technology generation, application and transition that enables rapid fielding of the right equipment when it is needed.
- Concentrating on Soldier systems engineering architecture, NSRDEC leads the Soldier systems
 integration domain through partnership and collaboration across the Army, Department of Defense,
 government organizations, industry and academia to deliver advanced capabilities through S&T
 generation and application.
- Core competencies: human systems integration sciences; clothing and protective equipment development; Soldier/small combat unit technology maturation and demonstration; expeditionary/contingency basing and collective protection; airdrop/aerial delivery systems development; combat feeding systems.
- Major Partners: PEO Soldier, PEO Combat Support and Combat Service Support, Army Research Institute of Environmental Medicine, Navy Clothing and Textile Research Facility.
- People:
 - o 642 civilians
 - 386 scientists and engineers
 - 50 doctorates, 122 master's degrees, 196 bachelor's degrees
 - o 22 military
 - o 50 contractors



2014 Successes

- By exploiting new and novel technologies, NSRDEC has developed several varieties of shelf-stable pizza that show potential as a safe and highly acceptable operational ration component. The integration of hurdle technology, laminated film layers, osmotic dehydration and intermediate moisture technology made this possible.
- NSRDEC conducted the Army Anthropometric Survey II, a comprehensive study of 12,000 male and female Soldiers that included new data collection and new biostatistical and morphometric analyses to optimize the human-system interface in the design of Army materiel.
- NSRDEC developed and patented a surface treatment disinfection system to safely and effectively
 sterilize equipment used to treat Ebola patients. Doctors and aid workers in West Africa are using
 the system to help combat the disease.
- NSRDEC developed and demonstrated the Enhanced Speed Bag system for aerial delivery systems. The system, with a pending U.S. patent, was selected to participate in the Army Expeditionary Warrior Experiments. The ESB increases the survivability of Class V munitions up to 98 percent compared with current techniques that typically result in up to 60 percent loss and 100 percent non-mission capable status of Class V when free dropped.