



ANL Army Natick Labs
Food Science Innovations

An overview of new technologies in MRE (Meals, Ready-to-Eat) development.

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1. Introduction

The nutritional well-being of our soldiers is paramount to mission success. ANL's Food Science team is at the forefront of developing MREs that are not only high in nutritional value but also lighter, more resilient, and palatable under extreme conditions. This report highlights our recent innovations in this critical area.

2. Technological Breakthroughs

- **Advanced Dehydration Techniques:** We have perfected a new method of flash-dehydration that preserves the texture and flavor of ingredients more effectively than traditional methods. This technology allows for a greater variety of meals and significantly reduces the weight and volume of the MREs.
- **Biodegradable Packaging:** In partnership with industry leaders, our team has developed a new line of self-heating, biodegradable pouches for MREs. This innovation reduces environmental impact and streamlines waste management in the field.
- **Nutritional Fortification:** We've introduced a proprietary blend of vitamins and minerals to MRE recipes, designed to combat the physical stress of combat environments and accelerate recovery. This blend enhances soldier performance and long-term health.

3. Field Integration

- The new MREs were successfully trialed by multiple combat units in diverse climates, from arid deserts to humid jungles.
- Feedback from soldiers consistently highlighted the improved taste, portability, and heating efficiency of the new prototypes.

4. Conclusion

Our commitment to providing the best sustenance for our soldiers remains steadfast. The innovations developed in 2024 represent a major leap forward, ensuring that our troops are well-fed and ready for any challenge, anywhere in the world.

For more information, please visit our website at anl-natick-labs.com.