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# Space technology used in food

The expedition of the astronauts in the outer space might seem almost unfathomable to an average person. Space technology actually penetrates our life in more ways than you think.

New or improved technologies into space often prove just as useful here on Earth. Through agricultural products, innovative consumer goods, manufacturing advances, and more, space technology works for the benefit of the world.

# Enriched Baby Food

Commercially available infant formulas now contain a nutritional enrichment ingredient that traces its existence to NASA-sponsored research that explored the potential of algae as a recycling agent for long-duration space travel.

These are believed to be highly beneficial to infant mental and visual development.



# Food Freeze Drying Technology

In planning for the long duration Apollo missions, NASA after extensive research into space food, developed the technique of freeze drying.

The foods are cooked, quickly frozen and then slowly heated in a vacuum chamber to remove the ice crystals formed by the freezing process. The final product retains 98% of its nutrition and weighs only 20% of its original weight.



# Water Purification

The engineers of NASA conceived a sophisticated water purification system to provide recyclable drinking water for astronauts far away from fresh water supply.

First launched in 2008, the apparatus processes unrefined liquid like sweat through adsorption, ion exchange and ultrafiltration, so that it is transformed into clean, safe-to-drink water.



# Eating on Demand

Energyst Development Center developed air impingement technology through oven designs for NASA's Space Station Freedom.

Jets of hot air at the top and bottom of the oven are focused on the food, rather than heating the oven cavity. This way foods cook faster and more consistently, retaining flavor and texture.



# Refrigeration Showcases

Space technology know-how to keep a spacecraft from freezing or frying was applied to refrigerator showcases.

The application of the space technology resulted in a refrigerator case that will keep foods cooler, longer. Such changes maintained the openness of the display, critical to customer visibility and accessibility, impulse buying, and cross-merchandising.



# References

<https://spinoff.nasa.gov/database/?k=food>

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