

57th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Interactive Presentations - 57th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (IP)

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A HISTORY OF SPACE FOOD :
ITEMS, ATTRIBUTES, AND CANDIDATES.

Abstract

Space food has been evolving and continuously improving since the first human spaceflight. Beginning with squeeze tubes and bite-sized cubes, contemporary space food has been made as similar as possible to food consumed on Earth, with fresh food supplied to station crews periodically. A myriad of efforts has been made to not only keep astronauts well fed, but also to provide nutrition and as much as possible delectability. Food is imperative for survival. There are clear links between good nutrition and human physical and mental health and quality of life. In a high-risk situation in a hostile environment such as spaceflight missions, the importance of qualitative and quantitative food is magnified. However, the space environment also poses significant challenges for the design and development of food. It is necessary to consider many elements when developing space food, including safety, stability, nutrition, reliability, palatability, variety, and resource minimization. During the 20th Space Generation Congress in Paris, a working group of 19 delegates representing 15 countries discussed and suggested solutions to challenges pertaining to space food and how their solutions can be reused on earth. One of the focus areas was on the best food items and their attributes for consumption in space. By tracing the evolution of space food from its beginnings to its current state, these space food items and characteristics can be identified. This paper aims to provide a comprehensive review of food that has been developed for spaceflight applications, so as to serve as a basis of understanding for current and future space food development. Keywords: food, nutrition, history