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THE FUTURE OF FOOD IN SPACE: 3D PRINTING IN SPACE MISSIONS

Abstract

The main objective of this article is to analyze the available scientific literature, focusing on the potential of 3D food printing with application within the space sector, for the development of nutritious and palatable products. Food 3D printing has emerged as an innovative technology with significant potential to transform the food industry and play a crucial role in space missions. This revolutionary technique uses raw materials in the form of powder, gel or paste to create three-dimensional food using a computer-controlled layering process. One of the main advantages of 3D food printing is customization. Food can be designed to meet the specific dietary needs of astronauts, ensuring that they receive the nutrients they need to stay healthy during extended space missions. In addition, this process makes it possible to create foods with textures, shapes and flavors tailored to individual preferences, helping to improve food satisfaction. It is extremely important to make research topics related to 3D food printing technology visible at this congress, as it addresses one of the key challenges facing space missions. This technology can improve nutrition, efficiency and food sustainability, which is critical to the success and well-being of astronauts.