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REVOLUTIONIZING THE COFFEE ROASTING PROCESS IN OUTER SPACE: HOW SPACE TECHNOLOGY AND MICROGRAVITY CAN ENHANCE PRODUCTS ON EARTH

Abstract

Space Roasters is revolutionizing the coffee roasting process in outer space to bring the people of Earth an out-of-this-world experience. The mission is to inspire and connect people to space by experiencing an innovative product produced by space technology first-hand. Space science has been giving us spin offs since the early days of the Apollo era, like freeze-dried food, to super-insulating blankets. The Space Shuttle era and ISS produced grooves in highways for increased traction and infrared ear thermometers. It is likely most people do not even know these were originally transferred from space applications. The power of these past space explorations has paved the way for organizations like Space Roasters to be the promise of the future. Coffee connects people across the world, no matter their background, religion, or culture and space is a frontier that inspires the same. Using coffee, one of the most common and understood products on Earth, Space Roasters is going to educate and show communities that space technology is an attainable way to enhance and enjoy products in everyday life. The theory is that by removing gravity we can prevent the beans from scorching and breaking apart, which happens using conventional roasting methods. This will yield perfectly roasted coffee beans with microgravity characteristics. Space Roasters will roast the beans in our patented Space Roasting Capsule (SRC), which will incorporate at least four pressurized chambers of beans. The beans will experience microgravity and seemingly float around in a bed of heated gas, giving them 360 degrees of evenly distributed heat and roasting to perfection. The trade-off analysis as well as experimentations will prove the best possible solution for obtaining the energy needed to properly roast the beans. Early solutions involve transferring heat during reentry, solar radiation, and a mixture of on-board energy storage devices, such as batteries, chemical reactions, and etcetera. These methods will heat the pressurized gas needed for roasting. People of Earth will be able to experience a product that has been around for centuries in a new and innovative way thanks to space technology. Space Roasters proves that the future of space exploration is not limited to large governments and elite billionaires. By enhancing a product here on Earth using space science, Space Roasters will inspire and motivate the next generation to continue seeking new frontiers.