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Life Support, habitats and EVA Systems (7)

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# IRMA PROJECT – STANDARDIZATION OF A MICROBIAL CULTURE ON AGAR MEDIA AND PAYLOAD OPERATIONS FOR MINIMIZING ASTRONAUT'S MANIPULATION RISKS AND

**Abstract**

As part of the International Cooperation Program between UNOOSA and CMSA for the use of the China Space Station (CSS), the team of Project IRMA has been working on developing an instrument that will work as an incubator and data recorder to study the effects of microgravity on the growth and production of protective molecules (biofilms) by bacterial species that could represent a health risk for future long-term human missions to space. The current advances on the standardization of cultures allow astronauts to only move samples between the instrument and the refrigerators, minimizing the exposure risk for them to these organisms. The methods for colony growth have been finished, the methods for antibiotic resistance and for the sample's ARN stability for return strategy are still under development. This will not only represent a useful methodology for research in space, but also for the implementation of medical installations in a future base on the Moon, Mars or other extraterrestrial locations.