

SCIENCE SHELL

TYPE-XIV

Our Bioreactor Type-XIV ScienceShell

Currently operational on ISS in
ScienceTaxi BioSpin

The Type-XIV ScienceShell is designed to accommodate **up to nine test tubes**, enabling parallel cultivation of cell or bacterial cultures under microgravity conditions. Its modular tube holder and baseplate provide secure positioning and isolation of each sample, allowing **multiple experiments to be conducted simultaneously within a single unit**.

Each ScienceShell can be **custom-tailored to match specific volume and sample size** requirements and is manufactured under controlled conditions to ensure flawless integration of biological materials into the experimental container. **Optional LEDs and sensors** can be integrated to monitor or influence environmental parameters according to the needs of each scientific application.



- Compatible OuterShell: 348
- Automation Level: Fully Autonomous
Operation Type: Passive
- LoC: 3** ; 1 (InnerShell) + 2 (OuterShell)
- Maturity: Spaceflight Proven (**TRL 9**)
- Last mission: HUMB
- Material of CC and Tank: Biocompatible photopolymer resin
Manufacturing Process: 3D Printed, Assembled by Yuri
- Number of Test Tubes: 9
- Volume of Test Tubes: 1 ml each
- Medium Exchange: NA
- Compatibility of Facility: **ScienceTaxi Haven-1, ScienceTaxi BioSpin**, SABL, Kubik, through ScienceBox (TangoLab & ICE Cubes)
- Advanced accessories: LEDs, Sensors
- Already flown biological material/cells:
Astrobiome Champion Strain™ Bacteria (Lactic acids bacteria)