

BRIC-100VC

Biological Research in Canisters (BRIC)-100VC

The Biological Research in Canisters (BRIC) is an anodized-aluminum cylinder used to provide passive stowage for investigations of the effects of space flight on small specimens. The BRIC 100 mm petri dish vacuum containment unit (BRIC-100VC) has supported *Dugesia japonica* (flatworm) within spring under normal atmospheric conditions for 29 days in space and *Hemerocallis lilioasphodelus* L. (daylily) somatic embryo development within a 5% CO₂ gaseous environment for 4.5 months in space.

BRIC-100VC is a completely sealed, anodized-aluminum cylinder (Fig. 1) providing containment and structural support of the experimental specimens. The top and bottom lids of the canister include rapid disconnect valves for filling the canister with selected gases. These specialized valves allow for specific atmospheric containment within the canister, providing a gaseous environment defined by the investigator. Additionally, the top lid has been designed with a toggle latch and O-ring assembly allowing for prompt sealing and removal of the lid. The outside dimensions of the BRIC-100VC canisters are 16.0 cm (height) x 11.4 cm (outside diameter). The lower portion of the canister has been equipped with sufficient storage space for passive temperature and relative humidity data loggers. The BRIC-100VC canister has been optimized to accommodate standard 100 mm laboratory petri dishes or 50 mL conical tubes. Depending on storage orientation, up to 6 or 9 canisters have been flown within an International Space Station (ISS) stowage locker.

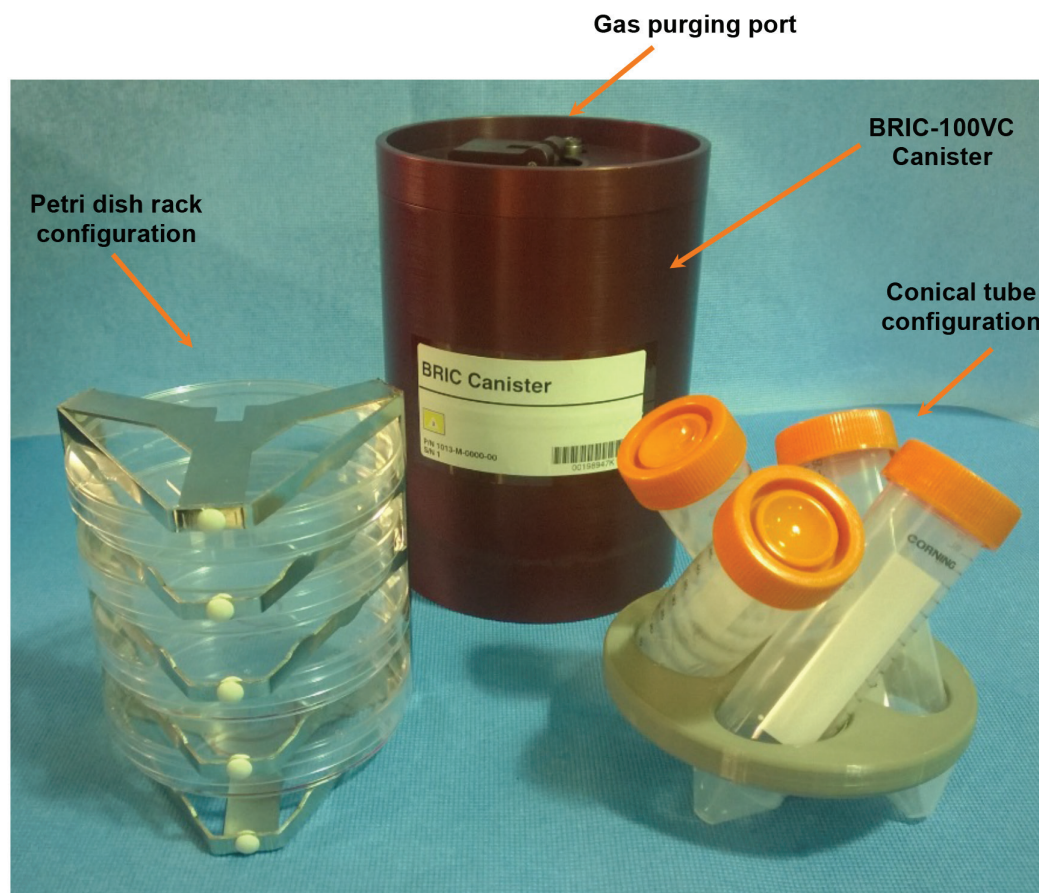


Fig. 1 BRIC-100VC with petri dish rack insert (left) and conical tube configuration (right).



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