

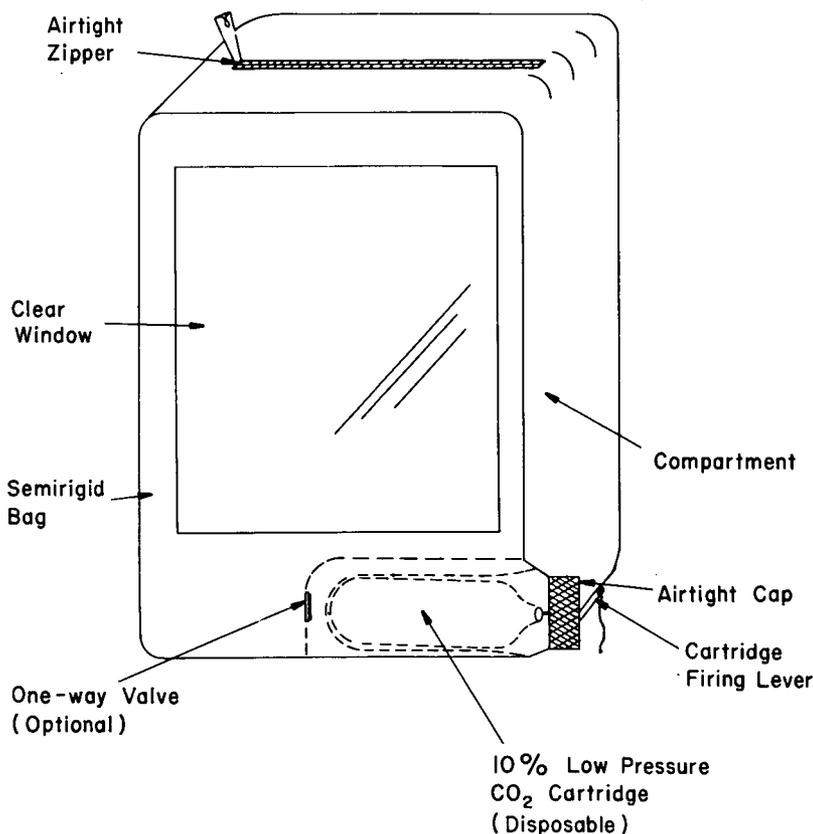
NASA TECH BRIEF

Manned Spacecraft Center



NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the National Technical Information Service, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Office, NASA, Code KT, Washington, D.C. 20546.

Reusable Anaerobic System for Microbiological Studies: A Concept



A compact, reusable, inexpensive chamber system has been designed for use in microbiological studies of anaerobic organisms, where incubation in a 10% partial CO_2 atmosphere is required for cultivation. A number of bacteria pathogenic to man, particularly the gonococcus, meningococcus, and brucella require an atmosphere of higher than normal CO_2 content.

The reusable anaerobic system, shown in the Figure is composed of a simple semirigid incubation chamber (Teflon lined beta cloth or similar material) with a clear Teflon window, airtight zipper and internal compartments for petri dishes or microbiological plates. A small, low pressure CO_2 cartridge, similar to cartridges employed for CO_2 guns, supplies the carbon dioxide in

(continued overleaf)

the chamber's atmosphere. The CO₂ delivery system is composed of a cartridge firing lever mounted in an air-tight cap, a delivery tube, and an optional one-way valve.

The system, because of its low cost and simplicity, should be of interest to educational institutions, especially medical schools, medical laboratories, and the manufacturers of biological and pharmaceutical supplies.

Notes:

1. This invention is in the conceptual stage only. At the time of this publication no model or prototype exists.
2. No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Manned Spacecraft Center, Code JM7
Houston, Texas 77058
Reference: B71-10495

Patent status:

No patent action is contemplated by NASA.

Source: Carlos Murawczyk
Martin Marietta Corp.
under contract to
Manned Spacecraft Center
(MSC-13920)