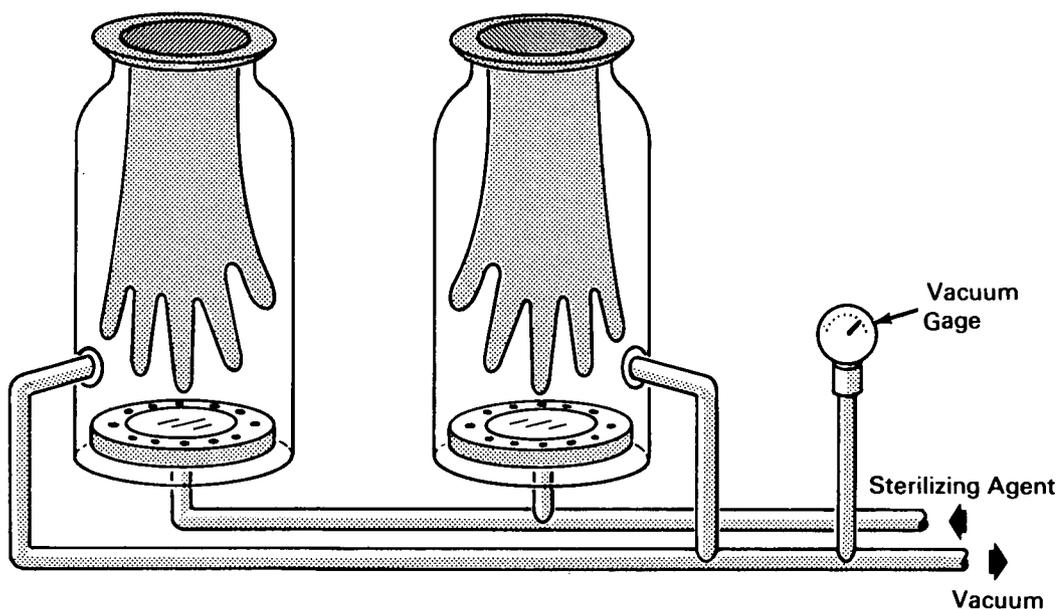


NASA TECH BRIEF



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Dispenser Leak-Tests and Sterilizes Rubber Gloves



The problem:

To design a portable apparatus that will leak-test, sterilize, and permit a pair of rubber gloves to be fitted without external handling.

The solution:

A vacuum-operated apparatus that inflates the gloves to test them for leaks, and sprays their external surfaces with a sterilizing solution. The gloves may be fitted to the hands directly from the apparatus, without an intermediate removal and handling step.

How it's done:

Two open sterilizer cups are fitted to a vacuum line and provided with multiple-nozzle spray heads that can

cover the entire volume of the cups. The nozzles are connected to a reservoir of sterilizing agent. The opening of each cup is flared to hold the stretched cuff of a rubber glove.

The gloves to be sterilized are inserted into the sterilizer cups and held in place by stretching the cuffs over the rims. The vacuum system is then turned on to inflate the gloves in the sterilizer cups for leakage testing. If the vacuum gage indicates that the gloves are not porous, the vacuum pump is turned off (without removing the vacuum from the cups) and the sterilizer solution is sprayed over the external surfaces of the gloves. When washing is completed, the sterilizing spray is turned off and the hands are inserted into

(continued overleaf)

the gloves, applying a slight downward pressure to release the cuffs from the rims of the cups.

Notes:

1. A water-operated aspirator may be used in place of a mechanical pump to provide a vacuum.
2. To prepare the gloves for use in industrial assembly clean rooms and in handling toxic materials, the sterilizing agent may be replaced with appropriate cleaning solutions.

3. This apparatus is in a conceptual stage only; as of the date of this publication a model had not been built.

Patent status:

No patent action is contemplated by NASA.

Source: North American Aviation, Inc.,
under contract to
Manned Spacecraft Center
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