Portable Chemical Sterilizer

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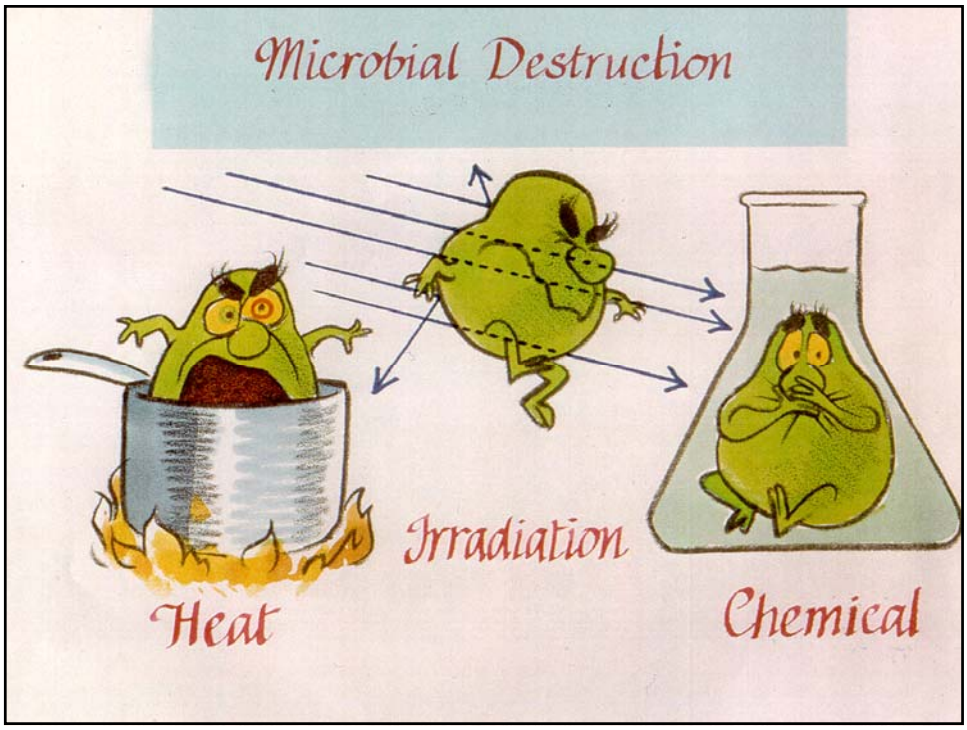
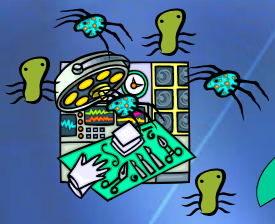
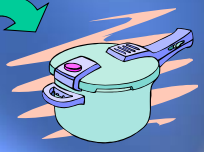
- 2 related patents
- 2005 Department of the Army Research and Development Achievement Award for Technical Excellence
- 2006 Nominated for Development Award for NSC's Small R&D Lab of the Year Award
- 1 Patent Licensing Agreement with Primus Sterilizer established through DoD TechLink (www.techlinkcenter.org)



Objective: Invent Portable Sterilizer for Surgical Instruments in Forward Areas or Austere Environments



Contaminated

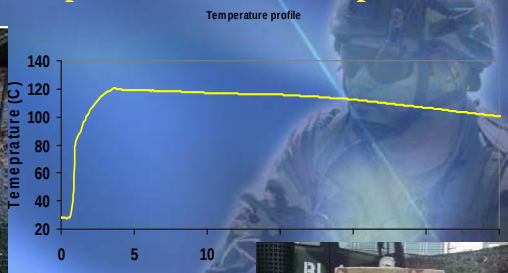


Chemical Heat

Sterilized Instruments

Moist Heat Sterilization using MRE heaters

- Heat kill using MRE heaters in pressure cooker
- T >121 °C and P > 17 psi, killed BT test strips



CHLORINE DIOXIDE USES

Building Decon

Medical Sanitation

Food

Materials Decon

Water Filters

Chemical Weapon Decon

Water Storage Tanks

AC Ducts and Filters

Chemical Sterilant – Chlorine Dioxide (ClO_2)

- ClO_2 is not the same as chlorine gas (Cl_2)
- Broad biocide – effective at low concentrations
- FDA-approved & EPA-registered
- Used in Anthrax attacks on Washington (Hart Senate Building, Brentwood Postal)
- Not transportable – must be generated on-site

Chemical Sterilizer prototypes




Chemical Sterilizer prototypes



Chemical Sterilizer prototypes

1. Add reagents

2. Generate ClO_2

3. Sterilized!!
(as easy as 1-2-3)

Collaborators

Academia

- **Brandeis University – Prof. Ken Kustin**
- **Stonehill College – Prof. Maria Curtin & students**
- **Rochester Inst. of Technology – Prof. Satish Kandlikar**

OGA

- **Institute of Surgical Research–Dr. McManus, Dr. Baer**
- **DoD TechLink – Marti Elder**

Commercial

- **PLA with Primus Sterilizer**


The Portable Chemical Sterilizer
This U.S. Army technology
is available for licensing.
Contact:
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