FACT SHEET

Office of the
Assistant Secretary of Defense (Health Affairs)
Deployment Health Support Directorate

For more information
(703) 578 - 8500
(800) 497 - 6261

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Deseret Test Center

DTC Test 73-30

Shortly after President Kennedy's inauguration in 1961, the Secretary of Defense, Robert McNamara, directed that a total review of the U.S. military be undertaken. The study consisted of 150 separate projects. The chemical and biological warfare review was known as Project 112. As part of the Project 112 review, the Joint Chiefs of Staff convened a working committee that recommended a research, testing, and development program for chemical and biological weapons. To oversee this program, the Deseret Test Center (DTC) was established at Fort Douglas, Utah, in 1962. Both land-based and ship-based tests were conducted during the period 1962 – 1973. The Deseret Test Center closed in 1973.

The objectives of DTC Test 73-30 were to determine viability decay of selected microorganisms impacted on microfilaments and exposed to a spectrum of sunlight conditions, and to obtain general trend information from a limited comparison of biological aerosol decay data using the microfilament and the free-floating aerosol techniques.

The microorganisms selected for determining viability decay in sunlight were *Serratia marcescens*, T-3 *coliphage*, and *Bacillus globigii*. *Serratia marcescens* and *Bacillus globigii* were used to obtain general trend data between the microfilament and free-floating aerosol techniques.

The microfilament technique trials employed the passage of a “charged” aerosol over microfilaments wound on stainless steel frames with a portion of the aerosol particles impacting on the microfilaments. This technique took place in the Controlled Environment Mobile Facility (CEMF). Free-floating aerosol technique trials used an E2 disseminator at the center of the Dugway Proving Ground West Vertical grid.

DTC Test 73-30 was conducted between February and June 1973 in the Controlled Environment Mobile Facility (CEMF) at Dugway Proving Ground, Utah.

Test Name	DTC Test 73-30
Testing Organization	Dugway Proving Ground, Utah
Test Dates	February-June 1973
Test Location	Dugway Proving Ground, Utah
Test Operations	The microfilament technique trials: "charged" aerosol particles passed over microfilaments wound on stainless steel frames with a portion of the aerosol particles impacting on the microfilaments. An E2 disseminator at the center of the Dugway Proving Ground West Vertical grid released free-floating aerosol particles.
Participating Services	Life Sciences Laboratory personnel, Dugway Proving Ground, Utah
Units and Ships Involved	Not identified
Dissemination Procedures	For the conventional aerosols trials an E2 disseminator was used.
Agents, Simulants, Tracers	*Bacillus globigii* *Serratia marcescens* T-3 *coliphage*
Ancillary Testing	Not identified
Decontamination	Not identified
Potential Health Risks Associated with Agents, Simulants, Tracers	*Bacillus globigii* Now considered to be *Bacillus subtilis var. niger,* a close relative of *Bacillus subtilis,* this bacterial species was used as a simulant and considered harmless to healthy individuals. *Bacillus subtilis* and similar *Bacillus* species are common in the environment, and are uncommon causes of disease. They have been associated with acute infections of the ear, meninges (brain lining), urinary tract, lung,

	heart valve, bloodstream, and other body sites, but always or nearly always in individuals whose health has already been compromised. Long-term or late-developing health effects would be very unlikely (except perhaps as a complication of the acute infection).(Sources: Tuazon CU, *Other Bacillus Species* (chap. 197), in Principles and Practice of Infectious Diseases, 5th edition (vol. 2), ed., Mandell GL, Bennett JE, Dolin R, Churchill Livingstone, Philadelphia, 2000, p. 2220-6; US Environmental Protection Agency, *Bacillus subtilis* Final Risk Assessment, February 1997, available at http://www.epa.gov as of October 4, 2002.) *Serratia marcescens* This bacterial species can cause acute infections of the urinary tract, lung, bloodstream, and other body sites. These infections commonly occur in individuals whose health has already been compromised, and often in patients who are already hospitalized. Long-term or late-developing health effects would be very unlikely. (Source: Eisenstein, Barry I., Zaleznik, Dori F., Enterobacteriaceae (chap. 206), in *Principles and Practice of Infectious Diseases*, 5th edition (vol. 2), ed., Mandell GL, Bennett JE, Dolin R, Churchill Livingstone, Philadelphia, 2000, p. 2303.) T-3 *coliphage* Coliphages are viruses (bacteriophages) that infect *E. coli* and are indicators of fecal contamination. There are two types of coliphages: male specific (F^+) and somatic. Male-specific coliphages are RNA or DNA viruses that infect via the F-pilus of male strains of *E. coli*. Somatic coliphages are DNA viruses that infect host cells via the outer cell membrane. (Source: http://www.epa.gov/nerlcwww/1601ap01.pdf [as of June 6, 2003]).