

MIL-STD-900C

9 April 1985

**SUPERSEDING
MIL-STD-900B
8 APRIL 1981**

MILITARY STANDARDS

**BACTERIAL STANDARDS FOR STARCHES, FLOURS,
CEREALS, ALIMENTARY PASTES, DRY MILKS AND
SUGARS USED IN THE PREPARATION OF
THERMOSTABILIZED FOODS
FOR THE ARMED FORCES**



FSC 89GP

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9 April 1985

DEPARTMENT OF DEFENSE
Washington, D.C. 20310-2300

Bacterial Standards for Starches, Flours, Cereals, Alimentary Pastes, Dry Milks, and Sugars Used in the Preparation of Thermostabilized Foods for the Armed Forces.

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1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. The proponent agency of this document is the Office of The Surgeon General. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-IVS, Fort Sam Houston, TX 78234-6100 or use DD Form 1426 (Standardization Document Improvement Proposal), which is self-addressed, appearing at the end of this document.

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1. SCOPE

1.1 Purpose. The presence of certain thermophilic spores in starches, flours, cereals, alimentary pastes, dry milks, and sugars used in the preparation of thermostabilized food products may cause spoilage, especially when these foods are stored at temperatures of 98 to 130°F (37 to 54°C). These spores are highly heat resistant, and may survive the processing temperatures to which the thermostabilized items are normally subjected.

1.2 Application. This standard is applicable to starches, flours, cereals, alimentary pastes, dry milks, and sugars used as ingredients in the preparation of thermostabilized foods for the Armed Forces.

1.3 Objective. This standard is primarily intended to define the maximum permissible limits of contamination by thermophilic spores in starches, flours, cereals, alimentary pastes, dry milks, and sugars used as ingredients in the preparation of thermostabilized foods for the Armed Forces and specifies the procedures to be used for microbiological analysis of these products in order to determine the presence of such spores.

1.4 Limitations. This standard does not apply to brown sugars or unrefined syrups.

2. REFERENCED DOCUMENTS

2.1 Issue of documents. The following document forms a part of this standard to the extent specified herein. Unless otherwise indicated, the most recent issue shall apply:

LAWS AND REGULATIONS

Not applicable.

2.2 Other publications. The following document forms a part of this standard to the extent specified herein. Unless otherwise indicated, the most recent issue shall apply:

American Public Health Association (APHA)

Compendium of Methods for the Microbiological Examination of Foods

(Application for copies should be addressed to the American Public Health Association, Inc., 1015 19th St., N.W., Washington, DC 20036.)

3. DEFINITIONS

3.1 Alimentary pastes. Alimentary pastes refers to such farinaceous ingredients as spaghetti, macaroni, and noodles.

3.2 Cereals. Cereals refer to such ingredients as cracker meal, cereal grits, oat meal, and bread crumbs.

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4. GENERAL REQUIREMENTS

Not applicable.

5. DETAILED REQUIREMENTS

5.1 Sampling. The sample shall consist of five 1/2-pound (200-g) sample units. Each 1/2-pound (200-g) sample unit shall be drawn at random from a different bag, drum, or box of dry ingredients in the lot. Each sample unit shall be collected under aseptic conditions and separately sealed in a sterile, clean, dry can, jar, plastic bag, or other appropriate container and sent to the laboratory. For liquid sugar: collect five 6 to 8 fluid ounce (180-240 ml) samples from a tank or truck when it is being filled or emptied.

5.2 Procedures for microbiological analysis. Procedures for determining conformance to microbiological standards shall be as specified in the latest edition of "Compendium of Methods for the Microbiological Examination of Foods."

5.3 Microbiological standards.

5.3.1 Thermophilic aerobic spores. No sample unit shall contain more than 150 spores per 10 grams of sample and the average spore count of the five sample units shall not exceed 125 spores per 10 grams of sample.

5.3.2 Thermophilic flat sour spores. No sample unit shall contain more than 75 spores per 10 grams of sample and the average spore count of the five sample units shall not exceed 50 spores per 10 grams of sample.

5.3.3 Thermophilic anaerobic spores not producing hydrogen sulfide. A minimum of two of the five sample units shall show no spore presence in all six tubes. In any sample unit testing positive for presence of spores, a minimum of two tubes out of the six tested shall show no spore presence.

5.3.4 Thermophilic anaerobic spores producing hydrogen sulfide. A minimum of three out of the five sample units shall show no spore presence. In any sample unit testing positive for presence of spores, the count shall not exceed 5 spores per 10 grams of sample.

Custodians:

Army - GL
Navy - SA
Air Force - 50

Preparing activity:

Army - GL
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Review activities:

Army - MD
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Copies of this standard for military use may be requisitioned on DD Form 1425 (Specifications and Standard Requisition) and submitted to Commanding Officer, Naval Publications and Form Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120. The title and identifying symbol should be stipulated when requesting copies of military standard.

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