

Manual of Sanitation Standards for Certain Products of Paper, Paper Board, or Molded Pulp

PREFACE

THIS Manual of Sanitary Standards for Certain Products of Paper, Paper Board, or Molded Pulp has been compiled as a result of prolonged conferences and studies of several groups working together for the purpose of ascertaining standards to guide manufacturers of certain paper products that are used to package liquid and moist foods for human consumption. The three groups which cooperated on this were (a) federal, state, and local health officials, (b) members of the Department of Plant Sciences of Syracuse University, and (c) representatives of the manufacturers concerned. The advice, counsel, and cooperation of several public health officials in various parts of the country have been received through correspondence. Three have participated in several conferences, for the most part held at Syracuse University. These officials are Mr. A. W. Fuchs, Sanitary Engineer Director, United States Public Health Service, Washington, D. C.; Mr. Walter D. Tiedeman, Chief, Bureau of Milk and Restaurant Sanitation, State Department of Health, Albany, New York; Dr. Milton R. Fisher, Chief of Milk Control, Department of Public Welfare, St. Louis, Missouri.

Syracuse University provides facilities to the manufacturers of these products for the testing of their raw materials and finished products to determine whether or not they meet the Manual requirements. Another service that the University will provide is, on request of the manufacturer, the inspection of his plant through the Department of Plant Sciences. The results of these investigations and inspections will be made available to interested health officials.

Syracuse University is well fitted to render the above services as it has a Department of Plant Sciences and the New York State College of Forestry, which includes pulp and paper manufacturing.

It is recognized that this Manual is only a beginning. Much factual information is needed before further steps can be made. The three groups which participated in the development of this Manual have, therefore, agreed that it will remain in effect until August 1, 1948, and that it will then be reviewed. Suggestions for change will be considered in conference and through correspondence. It is of necessity a live document, subject to amendment and correction to meet changing conditions and to reflect benefits to be gained from experience, research, and investigation.

DEFINITIONS

The following definitions shall be employed in the application and interpretation of these *Sanitation Standards*:

1. *Sanitation standards* is a statement of objectives in the interest of public health patterned after regulations and standards promulgated by official agencies.

2. The term *these products* shall mean the following products constructed in whole or in part from paper, paperboard, or molded pulp used for packaging or serving liquid or moist ready-to-eat foods and drinks for human consumption:

- (a) Milk bottles.
- (b) Milk bottle caps, hoods, and closures.
- (c) Round, nested paper cups, containers and covers.
- (d) Spirally wound cylindrical liquid-tight containers.

3. The term "Liquid or Moist Ready-to-Eat Foods and Drinks for Human Consumption" includes but is not limited to the following:

- (a) *Milk products* which shall mean and include the following when packaged: cream, sour cream, skimmed milk, milk beverages, skimmed milk beverages, reconstituted or recombined milk, reconstituted or recombined cream, buttermilk, cultured buttermilk, vitamin D milk, homogenized milk, soft curd milk, goat milk, and similar ready-to-eat foods which are within the purview of ordinances relating to milk products.
- (b) *Frozen desserts* which shall mean and include the following when packaged or served: ice cream, frozen custard, frozen milk, frozen cream, ice milk, milk sherbet, and ices.
- (c) *Other liquid or moist ready-to-eat foods and beverages* when packaged or served.

4. *Clean, sanitary stock* shall mean any paper, paperboard, or molded pulp made from the following materials:

- (a) Clean and sanitary virgin chemical or mechanical pulp.
- (b) A stock which is composed of clean, sanitary virgin broke, waste or cuttings from the original mill or fabricating plant, and other clean and sanitary stock.

5. *Broke and waste or cuttings* are paper and paperboard that have been discarded anywhere in the process of manufacture such as on the paper-making machine and in the form of trim. Similar products in fabricating plants are called waste or cuttings.

6. The term *slime spots* means the defects in paper and paperboard due to microbiological growths and products of growth.

7. *Bacteriological Standards.* All bacteriological examinations carried out under these *Standards* shall be made and reported in conformity with the latest edition of *Standard Methods for*

the Examination of Dairy Products and other applicable standard methods published by the American Public Health Association.

MANUFACTURING OPERATIONS

Item I. *Poisonous and Deleterious Substances Prohibited.* All materials used in the manufacture of *these products* shall be free from substances which may render the food injurious to health or which may impair the flavor, odor, composition, or bacteriological quality of the food.

Paper packages shall meet the requirements and conform to the sanitary standards required for food containers as set forth in the Federal Food, Drug, and Cosmetic Act.

Item II. *Fabrication from Clean, Sanitary Stock.* *These products* shall be made from clean, sanitary stock properly protected from contamination and free from slime spots.

Item III. *Adhesives Free from Poisonous, Malodorous, or Injurious Substances.* Adhesives employed in fabricating *these products* shall not impart odor to contents of packages, and shall not contaminate *the food* with microorganisms or any poisonous or injurious substances. Adhesives shall be stored, handled, and used in a sanitary manner.

Item IV. *Moisture-Resistant Materials.* Moisture-resistant materials when used for *these products* shall be free from substances which may render the food injurious to health or impart an odor or taste to the food. Moisture-resistant materials, when used, shall render *these products* adequately impervious to the transmission of liquids through the package material or through the package. Moisture-resistant materials shall not crack open, slough off, flake, nor pull away from treated surfaces to a degree which would render the food injurious to health.

Item V. *Protection from Contamination.* *These products* shall be handled, wrapped, packaged, trans-

ported, and stored in such manner as to prevent contamination.

All surfaces of *these products* coming in contact with food shall be protected from damage and exposure to contamination and shall be handled in a sanitary manner. For protection from contamination during shipping and storage, well constructed shipping containers shall be used which can be tightly closed and sealed.

Item VI. *Bacteriological Standards.* *These products* shall comply with the following standards:

- (a) Materials used and *these products* shall be free from coliform bacteria.
- (b) By rinse or contact tests, surfaces of *these products* which come in contact with the food shall yield not more than one colony per one square centimeter.
- (c) When *these products* are used for the packaging of milk or "milk products" as defined in the *Milk Ordinance and Code* recommended by the U. S. Public Health Service (*Public Health Bulletin* No. 220, 1939 Edition, as amended). *These products* shall conform to the bacteriological standards specified in that Code.

Item VII. *Sampling.* Compliance with *sanitation standards* shall be determined by bacteriological examination of *these products*. Bacteriological examination of *these products* shall be made each calendar quarter.

Item VIII. *Plant Sanitation.* *These products* shall be manufactured in a fabricating plant which is maintained and operated in a clean and sanitary manner, in clean and sanitary surroundings under adequate insect, rodent, and vermin control.

These products shall be protected from contamination by microorganisms, dirt, grease, splashing water, refuse, food residues, insects, rodents and other animals, and insanitary handling

by operators. Fabricating plants shall meet the following requirements:

(a) *Plant Surroundings.* The immediate surroundings of plants shall be kept in a clean and sanitary condition.

(b) *Buildings and Rooms.* The buildings and rooms in which *these products* are fabricated, handled, packed, and stored shall be clean, well lighted (natural or artificial) and ventilated, and free from dirt, insects, rodents, and other animals. Where fumes are present, rooms shall be equipped with hoods or exhaust fans.

(c) *Water Supply.* The water supply shall be easily accessible, adequate, and of safe sanitary quality. There shall be no cross connection between a safe water supply and an unsafe water supply. Bacteriologically, water shall meet United States Public Health Service standards for water used on interstate carriers or the requirements of the province (Dominion of Canada) wherein the plant is located.

(d) *Floors and Corners.* Floors and corners shall be kept clean and free from scrap and waste materials. Trim, converter waste, and cuttings which are intended to be re-used as defined in paragraphs 4 (b) and 5, shall be collected in clean receptacles or conveyed automatically to a room suitable for baling stock of high sanitary quality. Clean metal guards or other suitable devices shall be used to prevent contamination of in-process materials by contact with floors. Floors shall be kept in good repair and accessible for cleaning.

(e) *Machines and Other Mechanical Equipment.* Machines, units and appurtenances with which paper, blanks, materials, and packaging come in contact shall not contaminate *these products*. Machines, units, and parts thereof shall be kept reasonably free from accumulations of fiber. Contamination of materials used and *these products* by dirt, grease, and dripping oil shall be prevented. Temporary makeshift devices that may contaminate the product shall be avoided. Where

feasible, unnecessary overhead structures shall be eliminated.

(f) *Hand-Washing Facilities.* Hand-washing facilities shall be conveniently located and readily accessible, shall be provided with hot and cold running water, liquid soap or soap powder delivered from dispensers, individual cloth or paper towels, and suitable receptacles for disposal of towels, cleansing tissue, etc. Fixtures operated by foot, knee, or elbow are advised. The use of a common towel is prohibited.

Clearly legible signs shall be posted conspicuously in each toilet room instructing employees to wash their hands before returning to work. The common drinking glass and insanitary drinking facilities shall be eliminated.

(g) *Toilet Facilities.* Toilet facilities shall comply with local or state ordinances; shall be kept clean, well-ventilated, and in good repair.

- (1) Toilet rooms shall be free from flies and shall not open directly into rooms where paper or paperboard products are fabricated, handled, or stored.
- (2) Toilet room doors shall be self-closing; a room or enclosure open at the top is not satisfactory.
- (3) Toilet rooms shall not be used for storage of clothing, shoes, or lunches.
- (4) Toilet rooms shall be used only by operators for whom facilities are intended.

(h) *Lunching Facilities and Disposal of Food Residues.* Lunching at machines, in washrooms, and wherever materials and *these products* are held, fabricated, and stored shall not be permitted. Proper facilities shall be maintained for disposal of food scraps and bottles containing residues of milk and other drinks. Distribution and accumulation about plant of food residues, bottles, and other containers of food and drink shall be prohibited.

Item IX. *Personnel, Cleanliness and Health.* All persons coming in contact with materials used and *these products* shall handle them in a clean and sanitary manner; all such persons shall, (a) wear clean outer garments, (b) wash hands thoroughly with soap and water and dry them on a clean towel before commencing work, (c) wash hands thoroughly with soap and water and dry them on a clean towel before resuming work after visiting the toilet, and (d) keep the hands clean at all times while engaged in this work. Female employees shall confine the hair by means of a cap or net. Any person with acute contagious or infectious disease, receiving medication and/or requiring bandaging of fingers shall be promptly relieved of any connection with the manufacture of *these products* until, under advice of physician, all public health and sanitation hazards have been removed.

July 16, 1947

CURRENT INVESTIGATIONS OF LABORATORY METHODS USED IN MILK AND FOOD UTENSIL SANITATION

(Continued from page 12)

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