THE FOOD EQUIPMENT STANDARDS PROGRAM OF THE NATIONAL SANITATION FOUNDATION*

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The procedures of the 3-A Standards Committee of the International Association of Milk and Food Sanitarians are being used as a guide in developing similar standards for general food service equipment. This work is being carried out through a Joint Committee on Food Equipment Standards working under the auspices of the National Sanitation Foundation. Among the organizations represented are the International Association of Milk and Food Sanitarians, United States Public Health Service and American Public Health Association. Standards for soda fountains, dishwashing machines and general food service equipment have already been developed in cooperation with the affected industries. These standards, soon to be published by the Foundation, should be of material assistance to food sanitarians and food industry representatives.

A study of the sanitation programs of the various political subdivisions of the United States would reveal some interesting contrasts. Sanitarians from Florida to Oregon would give practically identical answers to the question, "What are the right time and temperature conditions for pasteurization of market milk?" There would be found a high degree of conformity to required pasteurization procedures. The milk processing buildings, room, and facilities would generally be of such high sanitary standards as to encourage invitations for regular inspection by groups of school children and clubwomen.

In some other fields of sanitation, our study would show a marked contrast. There would be a surprising lack of uniformity in the food sanitarian's answers to the question "What time and temperature conditions are required for effective machine washing and sanitizing of eating utensils?" Checks of actual operating conditions would commonly reveal neglect of this important health measure. Some dishwashing machines and hot water systems would be designed and installed so as to preclude their being operated in compliance with any acceptable standards. While we would find many sanitary restaurant kitchens and dishwashing rooms, there would be ample justification for the "private" signs so commonly found on doors leading to restaurant kitchens.

STANDARDS ARE ESSENTIAL

Improvement will depend upon several factors including:

1. National agreement on sanitary standards for equipment shipped throughout the country.

2. Uniform standards for better design, construction, and arrangement of food establishments.

3. Agreement on operation and maintenance requirements so food handlers, who as a class are migratory, need not learn new standards for each state and community.

The Joint Committee on Food Equipment Standards of the National Sanitation Foundation is providing means for meeting these requisites. Some food establishment equipment is already being built in accordance with Foundation standards. Printed copies of standards for food equipment sanitation standards will soon be available to guide industry and sanitarians.

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Joint Committee on Food Equipment Standards, National Sanitarian Foundation.
INTERNATIONAL ASSOCIATION PROVIDED LEADERSHIP

The International Association of Milk and Food Sanitarians can point with pride to its leadership in the development of uniform standards for the sanitary design of equipment. The 3A Committee demonstrated how public officials and industry can work together to achieve a common goal.

Drawing on those successful experiences, Past-President Walter Tiedeman, early in 1948, appointed a Committee on Food-Handling Equipment. That committee, under the co-chairmanship of C. W. Weber and C. A. Abele, recognized the desirability of working with other organizations and equipment designers, manufacturers, installers, and users. In its first report the committee said, "We are fortunate . . . an organization has already made great strides toward the goal of sanitary design of food-handling equipment . . . We would like to extend to the National Sanitation Foundation an invitation to collaborate in this work and to offer our full cooperation."

At a meeting in Ann Arbor sponsored by the National Sanitation Foundation in June, 1949, A. W. Fuchs, President of the Association, presented the committee's plan to representatives of six national sanitation organizations. With encouragement from Walter Snyder, these organizations developed procedures for organizing a Joint Committee on Food Equipment Standards.

It was recommended that the Foundation proceed to invite industry groups to form "task committees" to formulate preliminary drafts of sanitary standards for review by the Joint Committee.

The Committee recognized the importance of wide industry and official acceptance of Foundation standards, and that acceptance depends entirely on the standards being based on sound, basic research or on the best considered judgement of the authorities. It was agreed that it is most important for the entire membership of the participating organizations to understand and support the procedures of the committee.

The Joint Committee drafted and the Council of Consultants of the Foundation subsequently approved a detailed statement of procedures to be followed. One recommendation provided for appointment of a secretary by the National Sanitation Foundation and election of a Chairman, who is a delegate-at-large, to be selected from the 30 members of the Foundation's Council of Consultants. Mr. Walter Tiedeman is Secretary of the Committee. As a full-time member of the Foundation's staff, and with travel funds and freedom of action not usually available to a public employee, he has greatly expedited the work of the committee and of the industry task committees. He reviews manufacturing problems at plants where equipment is designed and made, arranges for research to answer particular questions and will follow up to determine when a Seal of Approval is merited.

The rules authorize individuals or organizations to recommend projects. Priorities are to be established by the Foundation in accordance with procedures approved by the Council of Consultants.

The Committee's operational procedures provide ample opportunity for especially interested officials of industry and health agencies to study and comment on preliminary drafts. The representatives of the participating agencies have all shown a sincere desire to obtain for guidance from the members of their organizations. They function in much the same manner as elected public officials. They will closely follow the general principles endorsed by their members but on the other hand, just as it is impractical for all legislative matters to be determined by a vote of the people, committee members cannot submit all details to the entire membership of their organizations. They will submit each preliminary draft to all members of their organization's committees and will encourage consultation with especially interested and qualified members and individuals.

After the final draft is approved by the Joint Committee it is submitted by the Foundation's Executive Director to the Council of Consultants for review and approval. The Foundation will publish approved standards suitably illus-
Food Equipment Standards

trated, to serve as guides for industry and control officials. The standards will form the basis for awarding the Foundation’s Seal of Approval.

"Seal of Approval" Program Adopted

Milk sanitarians know that equipment which bears the 3A approval is designed and built so it can be maintained in a sanitary condition. The National Sanitation Foundation “Seal of Approval” will furnish similar assurances to food sanitarians. Careful consideration is being given to developing practical procedures for awarding the seal for use on approved equipment.

Mr. L. J. Peterson, Administrative Director of the Idaho State Department of Public Health, is chairman of a committee appointed by the Foundation’s Council of Consultants to study this problem. Other members of the committee are Herbert Dunsmore, Clarence Klassen, Jerome Trichter, and the author. Rules were developed by the committee and have been approved by the Foundation. These will soon be used as the basis for checking specific equipment against the standards recommended by the “Joint Committee”. Safeguards are provided to make sure that equipment on which the Seal of Approval may be displayed complies with all practical, reasonable sanitation standards.

Development of Standards A Long Process

The development of sanitary standards involves a vast amount of labor and deliberation. Standards in some fields must be based on extensive research. For instance, the basis for standards for dishwashing machines is the extensive Foundation-sponsored work of Dr. Mallmann and his co-workers published in the two well-known bulletins on machine dishwashing. Their five years of work involved much original research work which is now familiar to most sanitarians. It included development of an artificial dish soil and a soil meter. Wash water volumes, velocities, pressures, temperatures, detergent strength and spray patterns were all found to be inter-related variables. Time and temperature requirements were established from research data. These data are now being incorporated into standards that must be practical for machine designers while producing utensils satisfactory to sanitarians and restaurant operators.

The industry task committees perform a major role in the program. They, in cooperation with the Joint Committee’s Secretary, prepare the detailed, preliminary standards.

Paralleling the experiences of the 3-A Committee, industry representatives are as genuinely interested in our objectives as they are in their own manufacturing and merchandising problems. The spirit of cooperation exhibited at the Foundation’s First National Sanitation Clinic is evident at meetings with each of the task committees.

Each of the participating organizations has made valuable contributions. Mr. Fuchs has provided the benefit of comments from each of the United States Public Health Service District Offices. The National Association of Sanitarians committee and its subcommittees have devoted many hours to study and constructive criticism of the preliminary drafts. Reports of this Association’s Committee Chairman Weber modestly tell of its work and contributions. Mr. Morton Hilbert has carried on extensive correspondence regarding standards with many members of the Conference of Municipal Public Health Engineers in addition to his work with their food equipment committee. Mr. Alfred Fletcher has similarly arranged to bring to committee meetings the considered opinion of leaders in this field among the State Sanitary Engineers.

This spirit of all working together toward common objectives is producing results and agreement at a surprisingly rapid pace. This, in spite of some weighty decisions. For instance, the $64 question throughout the consideration of soda fountain concerns space under units. After hours of deliberation, tentative agreement was reached. However, when Joint Committee members and industry task committee representatives met with their groups, further questions arose. The entire committee was brought to Ann Arbor for another full day of deliberation on this one point. Temporary standards were then adopted. It was proposed that, within 5 years, all ice cream containers be made shorter. The reduced container height would permit fountain manufacturers to provide adequate clean space underneath for cleaning and inspection.

Meetings subsequently held with ice cream manufacturers brought out the fact that ice cream manufacturers are really the customers of the soda fountain manufacturers. The ice cream industry spokesmen felt they must continue to make ice cream containers that fit existing units. It was further found that existing metal containers could not be discarded. "The customer is always right", so new solutions were sought and agreed to. The final standards will accomplish our sanitation objectives without upsetting the industry.

"Let’s Pull Together” Spirit Needed

There can be no compromise on matters which directly affect the public health. On the other hand, compromise is sometimes essential on items with which foods do not come in direct contact but which may affect ease of general cleaning or inspection. Sympathetic understanding on the part of all sanitarians is requisite to wide acceptance of standards by officials, by industry, and by the public. The standards and the Seal of Approv-
al will gain acceptance only in accordance with how they are supported and promoted by sanitarians and regulatory officials. New standards usually necessitate the spending of large sums to redesign machines, to change dies and for more durable materials. To stay in business the equipment fabricator must meet competition. This means that new standards must be accepted and demanded by enough users to permit cost reductions through mass production.

The importance of this point may be illustrated by the case of a large organization which has many soda fountains and luncheonette installations in most states. They bought some new soda fountains which were equipped with syrup pumps, built in accordance with the Foundation's sanitary standards. When the new syrup pumps were taken apart for cleaning, some parts were lost. The company's solution is further evidence of the need for national recognition and support of standards. To avoid the expense of replacing lost parts, they decided that new fountain installations would have the cleanable pumps only where locally required. It is reported that of the hundreds of cities and counties where they operate, only four seemed officially interested in this subject. All but these four localities are being supplied with the old impossible-to-clean pumps.

Uniform acceptance of standards is an economic necessity for manufacturers. The costs of producing cleanable syrup pumps will be excessive if the sanitation standards are of interest to only a few localities.

In the last analysis, the consuming public pays the bills of the manufacturer, installer, and the user. Uniform national standards will mean better quality equipment at a reasonable unit cost. Only through uniform standards can we hope to really improve our national food-handling programs. Joint action through the National Sanitation Foundation can elevate our entire national sanitation program. Let's apply sympathetic understanding in considering cases where compromise is necessary or where we do not fully agree with the group judgment embodied in the standards. Official approval by this and other organizations will add materially to the acceptance of the standards by official agencies and by industry. In the words of Mr. Carl J. Palmer in his article, "Association Cooperation for Better Sanitation", "Sanitarians are now carrying the ball. What they do with it will decide the game."

REFERENCES


CLEAN HANDS*

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Management has the responsibility of providing ample washing facilities so that the employee can keep himself clean, besides arranging for clean uniforms, aprons, hair nets, caps, boots, and other wearing apparel. This is still not enough, as it should also educate the employees through the supervisors or by means of posters or circulars on why it is important that the product be clean. A punch line like, "Would you like to eat the food you are packing, and would you recommend it to your friends?" could be quite effective.

*Presented at Sanitation School, Institute of American Poultry Industries, held April 19 and 29, Chicago.

Hand-washing facilities are oftentimes very much over crowded so that some of the people are unable to get their hands washed before it is time to go to work on the line. There are a number of good soaps and sanitizing type soaps that can be used. A lot of companies have found it advantageous to use sanitizing soaps containing agents such as hexachlorophene, as these have a residual bactericidal effect, and they also reduce the number of hand infections. The people can clean their hands with soap and water and rinse under continuous or foot-operated water sprays after which they can wipe their hands with disposable towels or ordinary sanitary toweling. Some plants do not always provide warm water for the washing of hands, and people just don’t like cold water for washing hands. If the employee with clean hands has to open a door with a dirty knob or grabs a dirty hand rail while leaving the washroom, then very little has been accomplished by washing the hands in the first place.

Hand-rinsing and knife-rinsing facilities are desirable on the eviscerating line. Here again the water should be lukewarm and the water sprays or jets should be conveniently located. Some plants have water spraying continuously from perforated pipes while others provide one water spray for each pair of operators.

Hair nets or caps are, of course, a must, and hair can get into the product even though the operators wear hair nets or caps. A lady can comb her hair and then wipe the comb on her uniform. The hair can stick on the uniform and fall off or rub off into the product at a later time.

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