Aims and Objectives of the National Sanitation Foundation.
W. L. Mallmann,-Professor Bacteriology and Public Health.
Michigan State College-
Member, Technical Research Committee of National Sanitation Foundation.

The foundation is a new Organization,located at Michigan State College and affiliated to it.

It finances and coordinates work of sanitation problems.

The importance of environmental sanitation has not been fully recognized in the past. There has been little proof of infection from Food, Dishes, Equipment, etc., but the danger is there. Environmental sanitation may be a minor source of infection, but is still important.

The Foundation is set up as a non-profit organization, financed mainly by trades to develop uniform standards and correct faults. The objective is to aid research by donations to Health Departments, Hospitals etc., in addition to work done by the Foundation.

Foundation is now engaged mainly in Restaurant sanitation-(Equipment, Washers, Chemicals). No direct association with Manufacturers.

Another objective is Education: of Sanitarians, Laymen, and Manufacturers, through publications, material for talks, and kits for demonstrations.

Direction of Foundation by a Board of Trustees:
a.-Dr. Simpson-(Army General-(retired).
b.-Wm. Claire-(Retired Hotel Operator).
c.-Dean Vaughn.

Research Committee:
a.-Dean Vaughn-(Chairman).
b.-Dr. Fooks,
c.-Dr. Dediman.
d.-Dr. Mallmann.

Education Committee:
a.-Acock-(Yale School of P.H.)
b.-Miss Mead-(Washington, D.C.)
c.-Si Mack.
d.-L. Dobson.

They look into standards and codes, and do publicity work.

Projects in Progress:
(1)-Mechanics of Dish-Washing Machines.-10-12,000 dollars already-spent on this.
(2)-Detergents--Test Methods-Work being done at Montana State by Dr. Walters.
(3)-Swab Techniques-(4 Labs. working on this,(e.g.-Dishes).
(4)-Cold Sanitation-(Michigan P.H. School, under Dr. Francis.

The Foundation is interested in Sanitary Organizations. It welcomes problems submitted by them on Environmental Sanitation.

(Cont'd).

Dish-Washing Experiments.

Machines in use have been found to be misused, as well as, not being well constructed.

Ten Washing Machines,(5 makes), are under test in one Lab. The first problem was to get a standard method of soiling dishes. Soil arrived at, is made up of wallpaper paste plus India Ink, Plus a test organizem, (Thermoduric), which has a resistance greater than Pathogens.

Dishes are put through machines at different temperatures and length of spray exposures.

Results showed (for single tank machine):
5 sec. spray gave very little kill at 170°F.
10 sec. spray gave 98-99% kill at 170°F.

The amound of waterflow was found to be important. Machines vary, providing from 8 to 17 gals. per minute. The more water supplied, the better the results obtained.

The position of the plate in the rack was important. Corner plates and those against the wood rack, or the part over a wide bar got little washing. The top spray (with no bar interference) always gave better results, while the bottom spray left "pattern" effect on dishes.

The wide-spread jet was found to be ineffective.

In testing for the effectiveness for washing,the principle of light reflection was employed. Porcelain dishes were used with a beam of light from above,directed on the plate.
0-10 "Units" of dirt was held to be a complete wash job.
10-40 "Units" was permissable.

Test Bacteria were also used to determine effectiveness. The idea was not to get percentage of heat kill, but to mix the "soil" with test organizms, and culture to determine what amount remained as part of the soil.

The test temperature used, was 135-140° for 1 minute (single tank). It was found that some dirt was removed better at 160° while other dirt baked on at this temperature. It was felt more advisable to use the lower temperature.

A wash-water count of 20,000 was found to give an unrinsed plate a count of less than 100; 60,000 water-count gave a test of over 100. Although the swab test was not high, it is still important to rinse, to <u>sanitize.</u> Even a 110° rinse therefore, gave a very low count. Dr. Mallmann felt that too much importance was placed on the swab test. It should be used, as with work on drinking water, as a sanitary principle, rather than to test results. Lab. work has been overemphasized in this connection. Use the swab as a tool, but don't depend on it. Often, much better counts are obtained than are anticipated when doubtful washing methods are used, and it hurts the Sanitarian's case as a result, in the eyes of the Industry.

---------00---------

Results of research will be given at A P H A meeting at Cleveland this year. Certain rinse a pan machine
3000 swabs of beer glasses rinsed in cold water without chlorine only 2 had count of over 200.