

## PUBLIC HEALTH

## Safe Seasonings Named

SOME 150 seasonings and flavorings—ranging from the familiar cinnamon to exotic “ylang-ylang”—have been put on the safe list, the Food and Drug Administration has announced.

Manufacturers who use these flavors in their food products need not furnish further proof of their safety. The list includes cloves, nutmeg, thyme, vanilla, mace, savory, coriander and extracts of spike lavender, wild cherry bark and balsam of Peru.

Ylang-ylang, an essence from the fragrant flowers of the custard-apple tree grown in the Philippines and Malaysia, is one of the flavorings more familiar to gourmets or the commercial food processor.

Seven flavoring substances are on the “wait and see” list, however. Safe usage for these is not “sufficiently well established among qualified experts to permit a formal determination by FDA that they are generally recognized as safe.” They include quinine, red and yellow cinchona barks, two forms of orris root, and wintergreen and methyl salicylate.

The quinine and cinchona barks are used

in “tonic” carbonated water, while wintergreen and methyl salicylate—chemically identical—have been used in candy for many years.

Studies to determine the safety of the candy flavorings are expected to be completed in about a year, the FDA reported. No action will be taken against foods flavored with oil of wintergreen or with methyl salicylate, however, since the amounts required for flavoring are small and there is no evidence of danger.

Levels of safe usage for the quinine, cinchona and orris will be set up by regulations issued in response to petitions from interested users, the FDA said.

In another action to keep food products safe to eat, the FDA announced that the pesticide heptachlor could not be used if residues appeared on harvested crops. New scientific data show that a breakdown product of the pesticide heptachlor epoxide is found on treated crops. In addition, residues of the epoxide appear in meat and milk when feed containing it is given to meat and dairy animals.

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## NAVIGATION

## Merchant Marine Declining

THE DETERIORATION of the United States merchant marine, a matter of vital concern to the Government, industry and the military services, can be checked only by drastic improvement of cargo-handling and ship-operating efficiency.

This warning was contained in a report issued by a panel of the National Academy of Sciences-National Research Council. The report was prepared by a nine-man advisory panel on the wartime uses of the U. S. merchant marine headed by Adm. Arthur W. Radford, USN (Ret.), a former chairman of the Joint Chiefs of Staff.

To avoid complete dependence on foreign-controlled shipping for the maintenance of its military and commercial lifelines, the report warned, the U. S. must carry out these improvements and make significant advances in ship design and construction.

The advances, according to the report, are technologically practical and can be commercially successful with minimum subsidy.

The report recommends construction of a “new class of cargo vessels of advanced design with speeds in excess of 20 knots” (about 23 miles per hour). Present cargo ships average about 16.5 knots, or 18.6 mph. These ships should incorporate a unitized system of cargo handling, embody increased mechanization, and permit automation, to reduce stevedoring costs, and allow quick turn-around of the ship.

Increasing the productivity of labor and management is a “more constructive alternate to subsidization,” the report said, but in both subsidized and unsubsidized seg-

ments of the U. S. maritime industry there is a “general lack of incentive to take advantage of technological advances.”

The report cited the following symptoms of deterioration and decline in the nation's merchant marine.

1. Most of its ships are nearly overage and long outmoded. As of July 1, 1959, the privately owned U. S. merchant fleet numbered 1,013 ships, of which about 800 were constructed before the end of World War II.

2. U. S. flag shipping is carrying a steadily decreasing portion of U. S. foreign trade (18% in 1957 and 12% in 1958).

3. The country is in danger of losing its “flag of convenience” fleet, which carries about one-third of its foreign trade. This fleet is comprised of U. S.-owned vessels flying the flags of Panama, Liberia or Honduras. Attacks on this arrangement by U. S. labor unions and some foreign interests have brought threats from the owners to transfer to the flags of traditional maritime nations.

The report recommended that the Government take the lead “in enlisting the cooperation of maritime labor and management to produce a technologically feasible fleet which will be competitive with minimum subsidy.”

The panel urged the establishment of a Federal agency to determine ways in which the transition to mechanized and automated production can be accomplished without undue harm to labor. It also stressed that consideration should be given to the de-

sign and construction of an experimental aluminum cargo ship.

Four possible courses of action were outlined for accomplishing an effective transition to more mechanized and automated crew and cargo handling procedures. These were taking maximum advantage of the natural attrition from the available work force, lowering retirement ages, retraining and relocating workers both within and without the industry, and adjusting salaries and increasing fringe benefits for those workers who remain in the industry.

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## ASTRONAUTICS

## Eight-Hour Working Day Unlikely for Space Crews

LABOR UNIONS may have to develop local number “outer space” because there probably will be no such thing as an eight-hour work day for space crews.

Dr. George T. Hauty, psychiatrist at the School of Aviation Medicine at Brooks Air Force Base, Texas, said recent short-term, simulated space flights have indicated that, although not desirable, a schedule of six hours of work followed by a two-hour rest period can be well-tolerated by trained pilots.

This amounts to an 18-hour work day and is probably the greatest work load a man can tolerate in one day without losing his efficiency, Dr. Hauty told scientists at a space medicine meeting.

Trained pilots appeared to be the best for one-man flights, he said. Conditions inside the compartment give the pilot the impression he is cruising in space. Any astronaut candidate should go through this type of conditioning, the psychiatrist suggested.

The men are given duties to perform during the work hours. These duties range from contacting the “ground,” actually observers outside the simulated cabin, to taking their body temperature and measuring the humidity of the air in the cabin, in addition to recording readings on the instrument panel.

However, only one man is in the cabin at any time, so he alone is responsible for gathering the data.

Tests have been run to determine how long one man can function properly alone in such a cabin. Some men experience hallucinations after staring at the instrument panel for various numbers of hours, Dr. Hauty reported.

One man saw gremlins on the panel and described them in great detail. Another swore that the television set was turning brown and getting hot. He predicted that it would explode. Another subject, after 18 hours, saw kittens and Indians on the panel.

With such information scientists hope to determine approximately how long a man can operate efficiently in a one-man vehicle. Scientists are also experimenting with a two-man cabin from which they expect to establish a definite two-man schedule of six work hours and two rest hours or possibly some other combination.

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