

CHEMISTRY

Two New B Vitamins

Closely related to pyridoxine, these two may bring greater understanding of the role of vitamin B₆ in nutrition and health.

➤ GREATER understanding of the role of vitamin B₆, or pyridoxine, in nutrition and health may come from the discovery and synthesis of two new B vitamins closely related to pyridoxine, it appears from an announcement from the University of Texas.

The new vitamins, pyridoxamine and pyridoxal, are reported by Dr. Esmond E. Snell, of the University's Biochemical Institute, in the *Journal of Biological Chemistry* (June). The final synthesis of the vitamins was carried out in the research laboratories of Merck and Company by Dr. S. A. Harris, Dr. Dorothea Heyl and Dr. K. Folkers, who collaborated with Dr. Snell in the last phases of the problem.

The new vitamins were discovered because they are several thousand times as active in promoting growth of certain

bacteria as is pyridoxine. They appear to make up an important part of the vitamin B₆ activity of plant and animal tissues. That such compounds existed in natural materials was discovered as early as 1941; their nature was at that time unknown, and they were tentatively called "pseudopyridoxine."

Pyridoxine has been found necessary for growth and health of all animals so far investigated. It is effective in treating anemia in rabbits, dogs, and hogs, in maintaining the nervous tissue of hogs, and in reducing oiliness of skin in some cases of human acne. The role of pyridoxine in nutrition and health has not been clear, however, and some of the possibilities opened up by the new discovery are being investigated further with the hope that the functioning of vitamin B₆ may be clarified.

Science News Letter, July 22, 1944

OCEANOGRAPHY

Harvesting the Sea

Five factories are hauling in tons of kelp from the coast of southern California and extracting the salts and gels which formerly came from Japan.

➤ HARVESTING the sea for its salty crop of useful seaweeds is a war-fostered enterprise with a promising future, declares Dr. C. K. Tseng, of the Scripps Institution of Oceanography (*Scientific Monthly*, July).

Five factories now, where there was only one before the war, are hauling in tons of kelp from the southern California coast and extracting the salts and gels our industries used to get from Japan. Great masses of seaweed stalks a hundred feet long are being mowed off Maine and California coasts for their yield of algin salts, good for emulsifying agents in camouflage paints, fire-proofing, and latex coating for signal wires.

Regard for future national defense should lead our government to give the growing seaweed business a permanent status, and not let it sink back into 90%

dependence upon Japanese supplies after the war, advocates Dr. Tseng, a seaweed diver himself.

The seaweed product most in need of government-sponsored research on cheaper methods of manufacture, Dr. Tseng believes, is agar, a kind of vegetable gelatin which the government is now buying at three dollars a pound for use in wound dressings, in bacteriological laboratories, in developing photographs and in manufacturing ice cream.

Using only 50,000 out of the 30,000,000 tons of marine crops which scientists estimate are available off Point Conception, Calif., the seaweed industry is worth annually \$2,000,000 to California now. The thousands of pounds of agar, algin and carragenin used in a peacetime year to give a creamy-smooth texture to chocolate malted milk, ice cream, and candies and the hundred thousand

pounds used as a moisture-guarding ingredient in bakery products are pointed out by Dr. Tseng as reasons why the seaweed industry merits improvement now to prepare it for the return of Japanese competition later.

The high food value of seaweeds is not something we should leave for the thrifty Orientals to thrive upon, warns Dr. Tseng. The rich supply of potassium chloride which the Japanese and Chinese get from their kelp diets is suggested by the seaweed specialist as the factor responsible for the complete absence of hay-fever cases in the Orient.

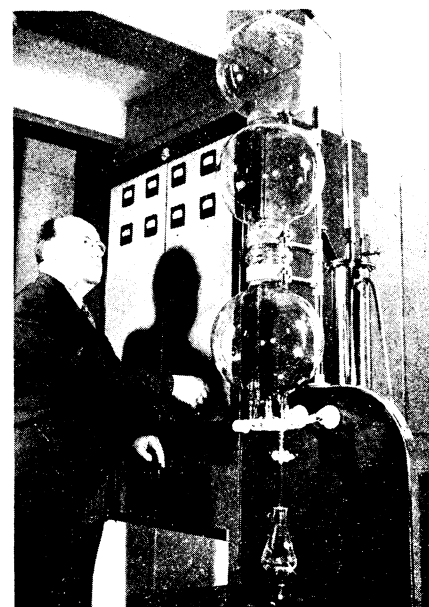
Because it furnishes vitamins and minerals, especially goiter-curing iodine, seaweed should have its place among common vegetables like cabbage and tomatoes, Dr. Tseng recommends.

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RADIO-PHARMACY

Radio Dries Penicillin Much Faster Than Old Way

➤ A METHOD of using radio heat for drying penicillin, accomplishing this step 48 times as fast as the present "freeze-drying" method, has been developed by Dr. George H. Brown, research engineer of the Radio Corporation of America. (Turn to next page.)



SAVES TIME—Life-saving penicillin is produced much faster when the solutions are dried with this new electronic installation, shown with its inventor, Dr. George H. Brown, research engineer of RCA Laboratories.