MEDICINE

Bacitracin Fights Germs

Made from germs, bacitracin clears up abscesses in a short time. It can be applied by injection or as a salve and is being prepared on pilot-plant scale.

➤ A NEW germ-fighting chemical from germs has saved 62 out of 100 patients from the surgeon's knife.

The new chemical, named bacitracin, was discovered by Dr. Frank L. Meleney and Miss Balbina Johnson of Columbia University's College of Physicians and Surgeons and the Presbyterian Hospital.

Particularly striking was the result in a dangerous abscess of the face below the lower lid near the outer side of the left eye. A red, hard area pointed in a triangular fashion toward the inner angle of the eye on the nose side. Bacitracin solution was injected into the abscess. Twenty-four hours later the pointing triangle had receded and the danger of germs invading the boy's skull and brain had passed.

Bacitracin scored another success in a patient with a deep abscess of the cheek. The abscess measured about an inch and a half in diameter. Pus was sucked out of the abscess with a needle and bacitracin injected on two successive days. On the fourth day the swelling was all gone and there was no need to cut the abscess.

Infected fingers, boils, carbuncles, styes and ulcers are among the other conditions in which bacitracin made it unnecessary for the surgeon to cut and lance, or, if surgery was needed, helped speed healing.

Both patients and doctor were often surprised by the speed and completeness of healing in some of the cases.

In the 12 cases in which results were not good, the infection had lasted long enough before treatment for a breakdown of tissue or other physiological disturbance, or the wound had become contaminated with other germs resistant to bacitracin.

Bacitracin was originally obtained from a germ from a badly infected wound in a patient who had broken the bone on the inside of his leg below his knee. Dr. Meleney and Miss Johnson found the material while looking for evidences of germ-fighting-germ action in badly infected civilian accidental wounds.

It is now being produced on a pilot-plant scale for Dr. Meleney's use on patients by the Ben Venue Laboratories at Bedford, Ohio.

So far, Dr. Meleney has used it locally, injecting it into an abscess or boil, or applying it in the form of a salve. Pilot-plant operations have now yielded the material in a form suitable for injection into muscles, as penicillin is now given, John T. Goorley, of the Ben Venue Laboratories, reported at a conference on antibiotics sponsored by the U. S. Public Service in Washington.

Science News Letter, February 22, 1947

ELECTRONICS

Electronic Tool Preserves, Sterilizes Fresh, Raw Food

➤ AN ELECTRONIC tool for sterilizing and preserving foods in their "fresh, raw state," is announced by Drs. Arno Brasch and Wolfgang Huber, of the research laboratories of Electronized Chemicals Corporation, New York, in *Science* (Jan. 31).

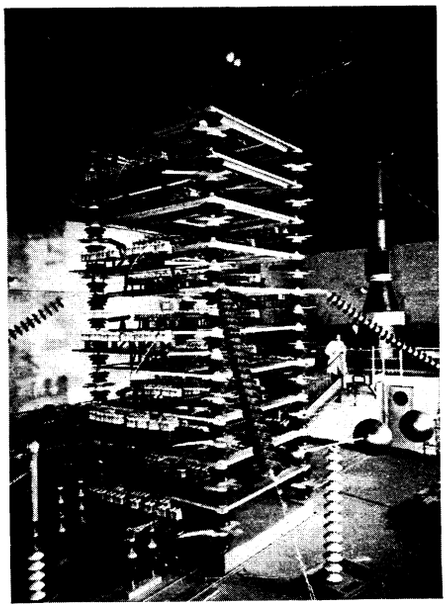
The Capacitron is the name of the device. It releases electrons during a time period of about one millionth of a second with an electronic intensity of about 30,000 to 50,000 amperes.

Medicinals, such as penicillin powder, novocaine solution and diphtheria antitoxin, and other therapeutic materials such as whole blood and plasma, were sterilized as well as foods. No change in potency or any harmful effects on the blood were observed.

Ground raw beef and fluid milk were among the foods made completely sterile, or germ-free, though they had previously been contaminated with germs.

Meat, fish, eggs, vegetables and fruits were preserved without any "deep-going" changes in taste, odor and appearance by impulse doses three to 15 times the sterilizing dose. This larger dose achieved its preserving effect by checking enzyme action, the scientists state.

"An irradiated steak," they report, "was preserved unchanged for all practical purposes after storage in the incubator at 37.5 degrees Centigrade (between 98 and 99 degrees Fahrenheit) for 12 days."



FOOD STERILIZING—The Capacitron, developed in the laboratories of the Electronized Chemicals Corporation, sterilizes and preserves food and drugs.

If the Capacitron lives up to its promise, it will be a very important development, in the opinion of other scientists who have read the first report of it.

While operating costs of the device might seem prohibitive, detailed estimates, the scientists state, show that such expenditures will not materially increase the final price of the treated product if the output of the Capacitron is adapted to the desired purpose.

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MINERALOGY

Rare-Earth Mineral Is Named Nuevite

➤ A NEW MINERAL, nuevite, has been christened by its discoverer, Dr. Joseph Murdoch of the University of California at Los Angeles. It is named for the town of Nuevo, Riverside County, Calif. Dr. Murdoch found the first specimen in a silica quarry near there.

Nuevite is described as a heavy, black, shiny material, containing the three rare elements yttrium, titanium and tantalum, together with iron. Although classified as a rare-earth mineral, its spectral analysis shows no uranium. Because of its scarcity, commercial uses are unlikely.

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