

theological writings have recently been identified, Prof. Casson said. A group of New York University classics department professors are working on the texts, which were all written in the seventh and eighth centuries A.D.

Fragmentary groups of pages from two papyrus Bibles containing the Gospel of John have been identified, and also random pages from the Epistles of St. Paul, as well as part of the apocryphal book, the Acts of St. George.

Science News Letter, May 17, 1941

MEDICINE

New, Life-Saving Treatment For Bleeding Stomach Ulcers

Treatment Consists Simply in Giving Patient Plenty To Eat and Drink; Death Rate Drops From 9% to 3%

A NEW and revolutionary treatment for bleeding stomach ulcers, credited with saving as many lives as the sulfa drugs are saving from pneumonia deaths, was announced by Dr. T. Grier Miller, University of Pennsylvania School of Medicine, at the meeting in Boston of the American College of Physicians.

A drop in the death rate from 9% to 3% has been achieved, Dr. Miller said, without the development of a new drug, without discovering the cause of ulcer, and without the use of any special diet.

The treatment consists simply in promptly giving the patient plenty to eat and to drink, even if his ulcer is still

causing bleeding. This treatment is directly opposite to the usual starvation treatment in which the patient was given nothing by mouth so long as there was any bleeding.

The type of diet, so long as it is not irritating, is less important than prompt and adequate feeding of the patient, Dr. Miller said. Operation in the midst of hemorrhage is rarely, if ever, justified, he added.

"Far better results, both as regards the survival of the patient and his comfort, may be expected" from this new treatment, Dr. Miller declared.

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CHEMISTRY

Salt Water May Be Made Fresh By Treatment With Plastics

BY TREATING salt water with synthetic resins, closely similar to plastics used for radio cabinets, cigarette cases, and a host of other things, it can be made fresh. Ships at sea, and mid-ocean island air bases, may benefit by these products.

Speaking before the American Chemical Society in St. Louis, Dr. Robert J. Myers, of the Resinous Products and Chemical Company, described these new plastic uses. In his paper, prepared in collaboration with Drs. John W. Eastes, Harold C. Cheetham and Frederick J. Myers, he stated that this is the first use of plastics as chemical entities. Previous uses have been mainly concerned with their physical attributes, such as hardness, color, durability, etc.

When sodium chloride, ordinary salt, is dissolved in water, its atoms break up

into ions. There are chlorine ions, which have an electrical negative charge; and sodium ions, which carry positive charges. Most of the compounds dissolved in sea water, or the impurities in tap water, are similarly ionized.

In the molecular framework of which the resin consists are sodium atoms. When water, for example, which is hard because of the ions of calcium, magnesium and iron it contains, is passed over such a resin, the sodium atoms exchange places with the hardness-producing ions. After all the sodium atoms are used up from the plastic, it can be treated with a salt solution, which puts them back again.

It is also possible to prepare the synthetic resins so that they take out the sodium and other positive ions from the solution, putting hydrogen ions in.

Treating tap water first with one, then with the other, of these "ion exchangers," leads to the production of a high quality "distilled" water, which compares favorably with, and in some cases exceeds, laboratory-distilled water in excellence," said Dr. Myers.

He cited other possible uses as follows:

"The resinous ion exchangers may be used in the softening of water for industrial, municipal and domestic use. They may be used in the partial or complete removal of salts from water, sugar solutions, protein solutions, biological and pharmaceutical media. They are of value in the recovery of traces of copper and other metals from dilute solutions, and in the removal of iron and objectionable acids from waters and industrial products. Other applications undoubtedly await the mere application of this new tool."

He pointed out that the zeolite process accomplishes some of these results in a similar way, but it cannot be used with solutions that are very acidic or alkaline. The resins work with either, and also with very hot solutions. The new process, he stated, was developed by the Department of Scientific and Industrial Research, of Great Britain.

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May Put Iron in Foods

INOSITOL, the anti-baldness vitamin (for mice—not men) could be used to make explosives, but chemists expressed the hope that it will be used for home defense on the nutrition front.

This sugar-like substance in the form of phytin combines with iron to make an almost pure white compound which "is being considered as a convenient form of adding iron in connection with the program of fortification of foods now being undertaken by the government," Dr. P. L. Pavcek and Dr. H. M. Baum, of the Biological Laboratory of Anheuser-Busch, Inc., reported.

Inositol is present in large amounts in corn where it is combined with phosphoric acid as phytin. Inositol, in the form of phytin, forms compounds with various metals, among which is iron. The fact that inositol forms explosive compounds with nitric acid has been known since 1850 but only in 1932 was it deemed important enough to serve as a basis of a patent.

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Homesickness attacks all races, and, so far as scientists have investigated, it is not affected by intelligence, education, or culture.