



SAFE

Children's toys are now made of rubber, which won't scratch furniture, and are packed in a box which serves as a miniature stage.

in amount and crude in character".

Some of the Hebrew expressions are literal translations from Egyptian technical terms used in medicine, he pointed out. On the other hand, there are Egyptian medical expressions which have puzzled Egyptologists, but which can be explained from their Hebrew equivalents. Prof. Yahuda added that Hebrew terms for boils, blains, eczemas, tumors, scurvy, scabs and treatment of sick were formed from roots exactly corresponding to Egyptian stems from which names of febrile skin diseases and therapeutic terms were derived.

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### CHEMISTRY

# Important Explosives Chemical Can Be Made From Petroleum

**G**LYCERINE, important industrial chemical used in the manufacture of explosives for America's defense program as well as in more peaceful pursuits such as the manufacture of resins for varnishes and lacquers and the processing of tobacco, can now be made from petroleum.

Members of the American Institute of Chemical Engineers, meeting in New Orleans, heard Dr. E. C. Williams, vice-president and director of research of the Shell Development Co., Emeryville, Calif., describe the new process.

At present obtained as a by-product from the soap and fat splitting industry, the price and supply of glycerine has been subject to wide variations. In 1917 it rose to 70 cents per pound and was difficult to obtain even at that figure. At that time it was made in Germany by a fermentation process, to the extent of about 13,000 tons annually, but this

method involved many commercial difficulties.

First step in the Shell process is the isolation of a gas, propylene, from the petroleum. Then comes a reaction with chlorine gas to form allyl chloride. This is treated with caustic soda to form allyl alcohol. In an alternate step, glycerine chlorhydrin is formed instead. The last step is the production of glycerine from one of the last two products.

In explosives manufacture, the glycerine is treated with nitric acid to form nitroglycerine. This is used to make dynamite and also some military explosives. The British explosive, cordite, also requires glycerine in its production.

Dr. Williams declared that the glycerine produced by the new method "is of excellent quality, meeting easily the specifications of the most rigorous user with whom we have yet come in contact."

*Science News Letter, March 22, 1941*

### MEDICINE

# Enzyme That Darkens Potatoes May Aid High Blood Pressure

**D**ISCOVERY that a common enzyme, familiar for its part in causing potatoes to darken, will reduce dangerously high blood pressure in human patients and clear up the eye and heart symptoms in high blood pressure is announced by Dr. Henry A. Schroeder, of the Hospital of the Rockefeller Institute in New York. (*Science*, Jan. 31.)

The name of the enzyme is tyrosinase. It is found in many fruits and vegetables, for example, apples, mushrooms and bananas, as well as potatoes, and also in human and other animal tissues. Dr. Schroeder used tyrosinase from mushrooms, but a mushroom diet is not therefore to be considered a cure for high blood pressure.

A pure preparation of tyrosinase was injected under the skin of 17 high blood pressure patients daily for from three to four weeks. In all but one, Dr. Schroeder reports, "the blood pressure fell a significant amount." Even patients in a late stage of the disease were improved.

Tyrosinase may be the long-sought

curative remedy for high blood pressure, but Dr. Schroeder does not think so, although he does not know yet. He is still working on the problem, trying to find out whether tyrosinase will prove to be a cure for high blood pressure or whether following this clew in further research will lead to discovery of another more effective chemical.

Reduction of high blood pressure and relief of other symptoms of the condition in small groups of patients have been accomplished by other scientists by the use of kidney extracts. Tyrosinase, which is found in animal as well as plant tissues, might be the active principle of these extracts, Dr. Schroeder said, but he does not think it is. The exact chemical composition of the kidney extract, however, is still unknown.

When he stopped giving tyrosinase to his patients, their blood pressure returned to its previous high level within three to six days, Dr. Schroeder reports. Improvement in the other symptoms and in the eye condition lasted longer.