RADIOACTIVITY

Isotopes Needed Abroad

Federation of American Scientists has urged the Atomic Energy Commission to make radioactive isotopes available to foreign scientists.

➤ RADIOACTIVE isotopes from America's uranium piles should be made available for scientific research anywhere in the world, the Federation of American Scientists has declared in an appeal to the U.S. Atomic Energy Commission.

A letter from the Federation council, signed by 13 American leaders in science, asks the Commission to make available radioactive materials "which are not involved in the production of weapons . . . (to) . . . responsible scientists and institutions throughout the world as soon as possible."

The letter makes a special appeal for radioactive carbon 14 for the Curie Laboratory in Paris. Irene Curie, co-discoverer of radioactivity and daughter of Marie Curie, is the director of the laboratory.

"The inexpensive quantity production of these materials in uranium piles now opens new vistas in fundamental research, and in the study and control of disease," the letter states in urging international distribution of radioisotopes.

"American science and medicine will profit, as they have in the past, by such a stimulation to world-wide study," the American scientists said.

"Even more important will be the clear evidence of our desire to place our unique resources at the service of mankind," continued the letter.

The scientists quoted a European delegate to the United Nations Atomic Energy Commission as saying that the first shipments, before the war, of heavy water from this country to Europe were "the best ambassadors of good will and international cooperation that American scientists could have sent to their European colleagues."

In calling for the shipment of radioactive carbon to the Curie Laboratory, the scientists said the situation "offers a unique opportunity, a peculiarly fitting setting, for dramatizing our national intention and for offsetting to some extent the ill feeling which restrictions upon science in this country have engendered abroad."

Science News Letter, June 21, 1947

CHEMISTRY

Colloids in Food Industry

➤ IF HARD water must be used in making mayonnaise dressing, add a little more mustard.

That isn't just a rule-of-thumb kitchen trick; there's real science in it. The mustard is an emulsifying agent, introducing a new set of electrical charges that latch onto the trouble-making calcium ions in the hard water and get them out of the way.

This was one of the practical ways in which a knowledge of colloid chemistry helps in the food industries, Prof. Ernst A. Hauser of the Massachusetts Institute of Technology told the meeting in Boston of the Association of Food Technologists.

Colloids, and their near relatives, emulsions, are intimate mixtures of two or more liquid substances in droplet or other finely divided phase, and their chemistry is to a considerable extent a study of the interrelations of the electrical charges borne by these minute particles. Familiar examples among foods are salad dressings, cheese, jellies, custard pie fillings and cornstarch puddings. It is tragedy enough to a housewife if a dozen glasses of jelly won't jell, but it may mean bankruptcy to a manufacturer if it happens to a hundred thousand dozen glasses. That's why he has to be right the first time, and there's where a knowledge of colloid chemistry can help him.

"Another problem with which the food industries are confronted was only recently brought to my attention by Dr. Cecil E. Dunn," the speaker continued. "The use of detergents for the cleaning of soiled glassware or metal containers is based exclusively on colloidal phenomena. However, what struck me most was a statement made by a member of the audience to the effect that he could not understand why a wetting agent like hexametaphosphate cleans bottles better than a solution of sodium hydroxide.

"The colloid chemist has the answer quite handy. The phosphate is adsorbed on the surface of the particles which will deposit on the glass or tin. Their electric charge is thereby increased and this will result in their rapid dispersion and removal by washing."

Science News Letter, June 21, 1947

GENERAL SCIENCE

Independent Research Important in Industry

➤ INDEPENDENT laboratories for scientific research and testing play an important part in America's industrial advancement, a recent survey of their work shows. The survey was made by the American Council of Commerical Laboratories to obtain information for a report to the President's Scientific Research Board.

There are approximately 275 such laboratories. They employ some 5,000 persons, the majority of whom are scientists and technicians. This figure does not include the approximate 2,000 laboratories maintained by individual corporations and other manufacturers and producers. These exist primarily for the companies which operate them. The independent laboratories are for smaller companies, and are ready to tackle almost any scientific industrial problem presented to them. Work already accomplished extends from metals and foodstuffs to packaging and paints.

Science News Letter, June 21, 1947

ENGINEERING

Sailors to Be Protected By Plastic "Greenhouse"

➤ SAILORS on the exposed bridges of future Navy ships may be protected from blast, weather and fumes by a transparent plastic "greenhouse."

First installation of the plastic shelter is being completed on the light cruiser USS Manchester, now enroute to Newport, R. I., from the Mediterranean.

Plastic panels mounted in a metal framework are being used. If the "greenhouse" passes its tests, the life of a Navy sailor will be more pleasant, and perhaps longer.

The plastic blast-and-weather hood was designed and constructed at the Navy Shipyard in Boston. Plastics being tested are acrylic resins.

Science News Letter, June 21, 1947