

RADIO

Radio Can Gage Radiation

By adding a low-voltage Geiger-Mueller tube to your home or car radio you can use it as a detector of radioactivity in event of an atomic attack.

➤ YOUR HOME or car radio can be used to detect the deadly radiations from an atomic bomb explosion. The only change required in most home radios—adding a detection tube—is so simple that you can probably do it, following simple directions.

How your radio can be converted into a radioactivity detector is described in a report by an atomic scientist, William D. Schafer. The report has just been declassified by the U. S. Atomic Energy Commission.

A low-voltage Geiger-Mueller tube, used in the famous Geiger-Mueller counters for detecting radiations, can be installed in your radio, the report explains. The tube can be installed in your home radio for detecting radiations and easily removed for listening to broadcasts.

In event of an atomic disaster in which radioactive clouds contaminate large areas, the home radioactivity detector would indicate the presence and intensity of contaminating radioactive dust by clicks or roars from the radio's loud speaker. The warning clicks might warn a family in time for escape to a shelter that is less radioactive.

You could easily check to see if your home radio-detector was working by holding a radium watch dial near the set. If the detector was working, even the tiny amount of radiation from a watch dial would cause

a few clicks per minute in the loud speaker.

A special low-voltage Geiger-Mueller tube is necessary for the home radio-detector, because your radio ordinarily has no more than 300 volts in its circuits. Laboratory G-M counter tubes require 600 to 900 volts for correct operation. But the low-voltage tubes have been developed. They could be mass-produced, the report declares.

In the simplest home detector, all that is needed is a low-voltage G-M tube and a special tube socket adapter. One of the tubes is unplugged and the adapter inserted instead of the tube socket. Removing the adapter and replacing the tube would again permit you to hear broadcasts.

In addition to serving as a detector of radiation in event of an emergency, your car radio might be used in prospecting for radioactive mineral deposits. Standard batteries would be used to give a high-voltage supply for the car radio-detector.

Three methods of making your radio perform as a radioactivity detector are described in the report. One, best adapted to car radios, would be the more expensive.

Big advantage of the new system is, of course, that most families have radios. Now, the report indicates, if you have a radio you can also have a relatively simple but effective detector of radioactivity.

Science News Letter, December 11, 1948

MEDICINE

Medical Aid from Lemon

➤ A CHEMICAL from lemon peel may be an aid in overcoming the blood damaging effects of radiation injury, whether from atom bombs, through accidental exposure or in cancer treatment, it appears from experiments by Drs. William G. Clark, Rex P. Uncapher and Mary L. Jordan of the Scripps Metabolic Clinic and Scripps Memorial Hospital in La Jolla, Calif.

The lemon peel chemical given to guinea pigs in their drinking water cut the mortality of the animals by about half when they were exposed to total body irradiation from X-rays, the scientists report in the journal, *SCIENCE* (Dec. 3).

An X-ray dose that killed 30 out of 45 untreated animals killed only nine of 26 that had been given the lemon peel chemical. The hemorrhagic symptoms of the treated animals were considerably less marked than those of the untreated.

The lemon peel chemical used is calcium flavonate, a substance like vitamin P. Its value for cancer patients would be that with it they could safely be given larger doses of X-rays in treatment.

Further practical advantage of the research is that it seems to show that smaller laboratory animals than the dog can be used in studies of this sort.

Science News Letter, December 11, 1948

CHEMISTRY

Shine Taken from Pants by Permanent Waving Fibers

➤ THE SHINE can now be removed from pants or skirts by putting a permanent wave in the fibers.

A new acid-and-abrasive-free liquid preparation that removes the shine from clothing

without injuring the fabric has just been made available to dry cleaners by the Vita-tex Products Corporation of New York.

The fluid, sold under the trade name Killshine, works on the same principle as cold permanent wave lotions. When applied to the shiny area of a piece of material, its chemical action temporarily softens the tiny fibers which normally form the nap. These fibers, now pliable, are brought back to their original position by brushing. Thus the nap is restored and the shine killed.

On fabrics that have no nap, shine usually results from a flattening of the fibers that make up the material. Killshine temporarily softens these fibers and brushing restores them to their original shape, thus killing the shine.

Science News Letter, December 11, 1948

GEOLOGY

U. S. and British Atoll Borings To Be Compared

➤ HOW OLD is an atoll?

This still-vexed question may be brought closer to solution at the U. S. National Museum through the arrival in Washington of two tons of rock from the British Museum. The rock consists of cores cut by a hollow drill that bit 1,100 feet down into the substructure of the British-held atoll of Funafuti, a half-century ago. These cores will be compared with similar cuttings made since the war at Bikini atoll.

As of now, there seems to be a wide discrepancy between the ages of the two sets of rock samples. The Funafuti cores were estimated to be not more than 25,000 years old when they were first examined; those from Bikini have been assigned an age somewhere between 10,000,000 and 15,000,000 years. A re-examination of the British material may indicate that the first estimate on its age was too low. However, there seems to be considerable difference between the mineralogical makeup of the rock samples from the two atolls, which lie 1,500 miles apart in the Pacific.

Negotiations for the loan from the British Museum were conducted by Dr. John W. Wells, Cornell University geologist.

Science News Letter, December 11, 1948

ASTRONOMY

Astronomer Finds Fifth New Comet in Three Years

➤ A FIFTH new comet in three years is being credited to Michiel J. Bester, young astronomer at Harvard's South African station.

Mr. Bester's latest discovery is too far south to be seen by American observatories and too faint to be seen without binoculars or a telescope.

Tentative name for the new comet: Bester Five.

Science News Letter, December 11, 1948