value by their own rather arbitrary definition. The third attempt to fill this order produced a source which seemed to be high by just a factor of 2. A telephone call to the supplier produced the information that the source had been "calibrated for 2π geometry" and that the listed microcurie value on the attached certificate should be corrected to so state. I must confess that had I seen such a statement on the certificate I would not have known whether to multiply or divide by 2 for 4π geometry.

I cannot help wondering what new theories have been reported in the literature based upon research results about which the authors were sufficiently naive to accept such "standards" at face value. I shudder to think of the possible consequences if a similar erroneous standard is sent to the radiology department of a hospital and is used to determine dosage of some radioisotope delivered to a patient.

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Mutagens and Carcinogens

Although there is much public concern for the genetic and cancer hazards of a number of uncertain factors, little has been done to prevent the ignorant or inadvertent use of compounds produced primarily for the induction of mutation and cancer. The majority of these agents can be purchased from a number of supply houses without evidence of proper qualification. Generally, neither the catalogs nor the labels on the containers carry information about the biological danger involved in handling them. Rarely is it possible to locate information quickly concerning the half-life of these compounds in solution, and it is even more difficult to find answers to problems of spillage. How many users know what happens to these chemicals when they are disposed of through the sewer, and how many plumbers are aware of the danger they face performing routine work around research laboratories or in industry?

I am well aware that the biological effects of the majority of organic compounds cannot be determined or stated with certainty, but at least the few hundred proven mutagens and carcinogens should be identified as such on the label by the manufacturer or distributor.

Some can certainly be classified as highly dangerous, others as of medium effectiveness, while the rest can be grouped according to their lower activity. Maybe a simple color code on the container can provide sufficient warning. The label should provide information on volatility, solubility, and half-life under the conditions of treatments commonly used. Instructions for methods of safe disposal should also be included. None of these compounds should be shipped in single-walled glass containers, and efforts should be made to employ vessels which do not overturn easily when opened.

It takes months to reveal the consequences of human contamination with carcinogens, and several generations are needed for genetic damages to surface after exposure to mutagens in organisms with a breeding system similar to that of man. Since the majority of the research laboratories are associated with schools, the inexperienced, young, and most susceptible persons have the highest chance for dangerous exposure. Some of the hazards could be effectively minimized by the adoption of the simple and inexpensive measures suggested here.

No new legislative or governmental actions are needed; only the regulations of the federal Food, Drug and Cosmetic Act should be extended to a number of old and new chemicals and perhaps expanded. The user institutions should adapt and adopt rules for handling carcinogens and mutagens similar to those in existence for radioactive compounds.

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Errors in Telegraphed Texts

With respect to my summary of the work of Katz and his colleagues, in the issue of 23 October which contained the article on the Nobel prizewinners (p. 423), readers will recognize easily that José del Castillo's name came out misspelled and that Merter Lectures are really the Herter Lectures, but many will not know that a quantum of acetylcholine probably contains something like 10^4 molecules rather than 104.

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