1198 Laser Radiation Causes Irreparable Eye Damage. W. T. Ham, Jr. Chem. Eng. News 45, 23-24 (October 23, 1967).

Laser radiation can irreparably damage the human eye. The observable damage is usually a retina burn, which can lead to a total loss of central vision, according to Dr William T. Ham, Jr., chairman of the department of biophysics at the Medical College of Virginia. Q-switched lasers are the most dangerous, Dr. Ham says, while some continuous-wave lasers, such as small helium-neon lasers, can be harmless. Because of these hazards, Dr. Ham favors controls on laser use. New York and Illinois already have laws aimed at reducing the number of laser accidents. However, it is feared that some laws may be written too hastily, denying lasers to legitimate users. Ham points out that many research groups are studying laser safety and that enough data are becoming available to set up meaningful regulations. Among those studying laser safety are groups at Stanford Research Institute, Stanford University Medical School, American Optical Co., New York University, Zaret Foundation, and at Brooks Air Force Base.

1199 Protect the Eye From Laser Hazards. L. A. Medici. Safety Maint. 134, 18-20 (November, 1967).

To meet the problems of laser safety and to find workable solutions, industry must rely on the teamwork of three specialists: the plant physician, the laser worker, and the safety director. Many doctors are acquainting themselves with the hazards that laser research poses. They are insisting that a thorough eye examination be given to each new laser worker. These eye examinations should be continued at regular intervals, with a written record to protect the company against unjust compensation claims. Most important, such examinations keep a close check on the danger of a gradual eye injury due to repeated laser beam bombardment. Repeated eye injuries, detected by regular vision checks, could indicate the need for complete revamping of laser operating procedures.

RADIOACTIVITY AND X-RADIATION

1200 Radiostrontium Absorption in Man: Suppression by Calcium and by Sodium Alginate. A. Hodgkinson, et al. Can. Med. Assn. J. 97, 1139-1143 (November 4, 1967).

Calcium chloride and sodium alginate, administered orally, have been shown to inhibit the intestinal absorption of radiostrontium by adult human subjects. Sodium alginate also inhibited the absorption of radiocalcium but to a less extent than radiostrontium. Measurements of fecal magnesium, iron, copper and zinc indicated that sodium alginate also inhibited the absorption of these metals. Maximum inhibition of radiostrontium intake was observed when sodium alginate was administered simultaneously with the isotope. Alginate samples having a relatively high guluronic/mannuronic acid ratio were slightly more effective in binding strontium, magnesium and calcium than those having a low guluronic/mannuronic acid ratio. The affinity of sodium alginate for ferric iron, strontium, calcium and magnesium decreased in the order $Fe > Sr > Ca > Mg$, the binding of one molecule of these elements being accompanied by the release of two or three molecules of sodium, depending upon the valency. Binding was dependent upon pH, being virtually abolished below pH 3.0. It is concluded that the binding of metallic ions by sodium alginate involves an ion-exchange mechanism. There are 27 references. -- Authors' summary

1201 Accumulation of Zinc-65 From Prolonged Consumption of Columbia River Fish. R. F. Foster and J. F. Honstead. Health Physics 13, 39-43 (January, 1967).

Fish caught down river from the Hanford reactors were eaten once each week for more than one year. The accumulation of Zn-65 in the consumer was measured each week in a whole-body counter to trace the build-up and follow the seasonal trend. A maximum body burden of about 130 nCi Zn-65 was reached on day 104 and again on day 310. After the initial build-up toward equilibrium, the body burden approximated 7 times the weekly intake. The reduction of Zn-65 body burden following the last meal of Columbia River fish was observed for 511 days, indicating an effective half-life of 162 days. There are 8 references. -- Authors' abst. cond., Public Health Eng. Absts.