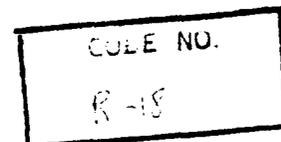


REPOSITORY MMES-ORNL  
COLLECTION 4500S AHC  
BOX No. KZ Morgan  
FOLDER R-18

723944



December 23, 1965

Mr. Frank H. Day  
Division of Nuclear Medicine  
University of Miami School of Medicine  
Jackson Memorial Hospital  
Miami, Florida

Dear Mr. Day:

I am very happy to hear of your recent studies with reference to the gonad dose for infants that are treated with plaques of Thorium X. Such studies are indeed of great value.

I am enclosing a copy of the reprint you requested, "Relative Hazard of the Various Radioactive Materials." Also enclosed is a copy of an earlier paper on "Dosimetry of Internal Radioactive Isotopes" which may be of passing interest.

It was indeed a pleasure to see you again when I was in Miami and I hope you will consider that you have a standing invitation to visit our Laboratory anytime it suits your convenience.

Sincerely,

*Handwritten signature*

Karl Z. Morgan, Director  
Health Physics Division

KZM:jc

Enclosures

1168244

A-00544

Human Studies Project

UNIVERSITY OF MIAMI  
SCHOOL OF MEDICINE  
JACKSON MEMORIAL HOSPITAL  
MIAMI, FLORIDA 33136

December 18, 1965

DEPARTMENT OF RADIOLOGY

Division of Nuclear Medicine

DEC 21 1965

Dr. Karl Z. Morgan  
Health Physics Division  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee 37831



Dear Dr. Morgan:

It would be greatly appreciated if I might receive a reprint of the paper from Volume 10 of HEALTH PHYSICS, entitled Relative Hazards of the Various Radioactive Materials, by Morgan, Snyder, and Ford.

Dr. Victor Witten of the Dermatology Section at Jackson Memorial Hospital and I are concerned about some recent papers claiming seemingly high gonad dose for infants as they may be treated with plaques of Thorium X. In order to establish the gonad dose for various practicable conditions of Thorium X therapy, Dr. Witten and I are using an infant Masonite phantom and making dose measurements with 0.2-r dosimeters and pocket chambers for plaques containing originally about 300 microcuries of Thorium X. Our measurements generally indicate that much less gamma-ray dose is received, than has been claimed for example by C. G. Schirren in ARCHIV FÜR KLINISCHE UND EXPERIMENTELLE DERMATOLOGIE, Bd. 213 (1961) S. 32, and by Walter Seelentag in MÜNCHENER MEDIZINISCHE WOCHENSCHRIFT, Bd. 105 (1963) Nr. 39, S. 1891. They report that their measurements were made with G-M-type count-rate meters. In particular, Schirren states that he was using the Model FH-40 G-M survey meter manufactured by Frieseke & Höpfner in Erlangen. It seems that an excessive response might occur for a count-rate meter, especially for the scattered radiations, since many of these radiations may fall in a spectral range of predominant photoelectric absorption of such an instrument.

Reprints of the papers which you left here at the time of your lecture at Jackson Memorial Hospital a couple of years ago have been interesting reference material regarding natural background, in particular, your 1963 paper published in SCIENCE, entitled Permissible Exposure to Ionizing Radiation, also an assembly of unclassified drawings, including Nos. 67395R4, 73595R1, and 78821. Thanks very much for your detailed reports, as they offer a degree of satisfaction to people who are attempting to establish what their measurements may mean with reference to natural background.

Sincerely yours,

*Frank H. Day*  
Frank H. Day

1168245