

C618805 : MAJOR NUCLEAR TECHNOLOGY

KEY WORD: X-RAY DOSE / COLOUR TELEVISION / CaSO_4 (Dy) TLD

VIPHAVADI AKAVAKOM : MEASUREMENT OF X-RAY DOSE FROM COLOUR TELEVISION SETS USING CaSO_4 (Dy) THERMOLUMINESCENCE DOSIMETER.

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The measurement of X-ray dose from colour television sets using thermoluminescence dosimeter (TLD) is aimed to evaluate the X-ray doses from various type and size of the picture tube of television sets which are basic data useful in radiation protection. The measurements were carried out using CaSO_4 (Dy) TLD powder filled in small thin black light-proof plastic envelopes sticked to the front, upper, both sides and back of 60 television sets having picture tube size from 14 to 21 inches and picture tube type as Shadow mask, Inline, and Trinitron for average period of 2 months. It was found that only X-ray from the front area of picture tubes can be detected with the dose rate correspond to the picture tube types of 1.59 - 15.58, 1.60 - 23.28 and 1.18 - 43.06 $\mu\text{R/hr}$ respectively which are much less than the recommendation of the NCRP.

ภาควิชา นิวเคลียร์เทคโนโลยี.....

สาขาวิชา นิวเคลียร์เทคโนโลยี.....

ปีการศึกษา 2539.....

ลายมือชื่อนิสิต.....^{ป.๓๓๑} ต.พ.๓๓๑

ลายมือชื่ออาจารย์ที่ปรึกษา.....

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....