

EVALUATION OF BODY CONTENT ^{90}Sr IN WORKERS
USING EXCRETION ANALYSIS

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ABSTRACT

The review of the radiotoxicological control of the seven workers which were contaminated by radiostrontium in an accident is presented. The contamination occurred in the laboratory condition during the work with the $^{90}\text{SrCl}_2$. These conditions may be accepted as the single intake. It was estimated that the main way of the ^{90}Sr intake was the gastro-intestinal canal.

Evaluation of the internal contamination levels was found out by determination of the ^{90}Sr content in the 24^{h} urine samples, using the quantitative radiochemical methods in the programmed time intervals. From the excretion data of ^{90}Sr by urine, the initial body activity of radiostrontium $A_0(\text{Bq})$ was calculated and further theoretically treated by extrapolation function for excretion and retention.

The satisfying correlation between the experimental and theoretically expected data (according to ICRP recommendation) was found.