Analysis on social-demographic workers profile in the radioisotope production industry

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Regarding demographic and epidemiologic studies, is essential the knowledge of a reference population. In this context, was used the knowledge of the workforce composition in the facility responsible for the radioisotope production and distribution in Brazil. The main aims of this paper are: to identify the social-demographic profile of the facility workers based on stratification variables (such as gender, age, and task performed by worker) and, to assess the annual collective doses of workers with potential risk of ionizing radiation exposure at the workplace during five-year period. The personal monitoring programme has been carried out by individual dosimeters, TLDs, and internal contamination via in vivo methods. The results of reported doses in the period studied, suggest that the external irradiation was the main source of occupational exposure in radioisotope production and distribution. The internal exposure was not included in the doses estimated due to be not significant. This study has an important exploratory character, in order to analyze possible correlations related to adverse health effects, aiming to provide direction for occupational epidemiology research.