

<<吸入钍尘对矿工健康的影响与防治措施>>

图书基本信息

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前言

This comprehensive study covers a wide range of investigations from the technical problem of setting up and improving the efficiency of a reliable system for assessing lung burdens of thorium by measuring the activity of thoron exhaled in the breath, through experimental studies in animals and in cultured cells to haematological, biochemical and radiological and epidemiological investigations involving some 3000 dust-exposed and 4000 non exposed miners. An important aspect of this study was the efforts made by the research team to encourage both the miners and the management to take an active interest in the work, and wherever appropriate during the period of the study, to use the results to directly improve health and safety procedures in the mine.

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内容概要

本书主要内容包括呼出气中钍射气活度测量系统的建立及其应用、白云鄂博稀土铁矿接尘矿工肺内钍沉积量和周围血象的量效关系、白云鄂博稀土铁矿接尘矿工肺内钍沉积和肝功能的量效关系、白云鄂博稀土铁矿接尘矿工发生尘肺等非随机性效应的量效关系、白云鄂博稀土铁矿矿工肺癌死亡率的流行病学调查、呼吸道吸入二氧化钍和稀土矿尘的联合作用、二氧化钍从1名矿工肺内廓清的7年连续观察和分析以及综合性卫生防护措施和效果等。

本书是英文版。

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章节摘录

It has been more than 40 years since the publication of Dr. R.E. Albert's monograph: "Thorium, Its Industrial Hygiene Aspects". The American scientist Dr James Stebbings and the Chinese scientists Professors Ye Gen yao, Fu Tie cheng and Xiong Bin kun proposed the publication of an updated monograph on the health effects of inhaled thorium. Such a monograph should be very useful to experts in the fields of radiation health and radiation protection, environmental radiation surveillance, radiation clinical medicine and also to teachers and students in the above-mentioned fields. Since the mid 1970s, the research group chaired by the first author of this monograph has cooperated with scientists from the Radiation Protection Department of the Beijing Epidemic Prevention Station and the Hospital of the Bayun Obo Rare Earth Iron Mine to carry out an investigation on the health effects of miners and other workers inhaling thorium containing rare-earth dusts in the Beijing Tong County Rare-Earth Refinery, the Beijing Roller Factory, the Beijing Fertilizer Factory and also in the Bayun Obo Rare-earth Iron Mine for 30 years.

媒体关注与评论

The book has been put together very thoughtfully and carefully and I'm sure your readers will appreciate the tremendous amount of effort you and your colleagues have put forth to conduct these careful studies over many years.-- Brues Boecker. Lovelace Respiratory Research Institute. U.S.A. In this monograph, the results of 1158 measurements of exhaled thoron activity, About 10422 measurements of four peripheral blood and five hepatic function parameters, 1158 measurements of lung function test and X-ray radiograph on the miners were reported. —Tiecheng Fu. China Institute for Radiation Protection. China. Thank you for forwarding me your paper on the long term health effects of exposure to Th and SiO₂. I found the paper interesting. It is a land mark study.— Rogar O. McClellan. Toxicology and Human Health Risk Analysis. U.S.A This series of investigations, which began in the mid-1970s, culminated in the first report showing that lung cancer can be induced in humans by inhalation of natural thorium dioxide in mine dust.--David MTaylor. Cardiff University. U.K. I have just finished reading the last of the ten chapters in your monograph, all of which I found to be scholarly,clear, well written, and highly informative. Together, they present a well documented account of your long-term investigation of the health effects of inhaled thorium-containing dusts and thoron progeny. You and your associates are to be congratulated on the high quality of your work, which is of far-reaching importance to radiological protection and environmental health.—Arthur C. Upton. Robert Wood Johnson Medical School. U.S.A The most invaluable finding in Professor Chen's study is it first discovered that either long-term inhalation of rare earth ore dusts containing thorium (carcinogens are SiO₂ and ThO₂) or inhaled ThO₂ or thoron short-lived progeny could induce lung cancers in the exposed miners.—Nanshan Zhong. Guangzhou Institute of Respiratory Disease. China.

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编辑推荐

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