

## RADIOLOGICAL ASSESSMENT OF THORIUM WORKERS

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### ABSTRACT

Brazilian soil is a major depository of Natural Thorium. It is extracted from monazite sand and is concentrated in a mill located in São Paulo, the largest industrial city in Brazil. Workers in this mill have been employed for times up to 33 years. We have monitored these workers through urine, feces and whole body counting bioassay techniques. We have developed a technique for "in vitro" monitoring in which it is possible to analyse both uranium and thorium, since monazite sand has a percentage of uranium. "In vivo" whole body monitoring is accomplished by analysing both Tl-208 and Ac-228. "In vivo" and "in vitro" measurements are compared.

The thorium concentrate produced in this mill is sold to several industries, including a gas lamps factory. We have monitored works from this industry using the same techniques described above.

Results from monitoring performed in the mill and in the industry will be shown. A comparison giving emphasis to the employing time is made.