

DETERMINATION OF MERCURY IN SEDIMENTS OF THE POMBA RIVER, RIO DE JANEIRO STATE, BRAZIL.

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The objective of this work is to study the dynamic of the mercury in the alluvial sediments and stream - sediments in the Pomba river where occurred the extraction of gold using the process of amalgamation by mercury during the eighties and the beginning of the nineties. Considering that mercury can overcome chemical modification when exposed to the natural environment, presenting different levels of toxicity to the living organisms, it was established, with this work, the real partial and total content of mercury in there sediments extracting samples from twenty-six selected sites along the mentioned area of. study. The methodology used was based in total and sequential extraction. The results showed that the total mercury ranged from 155 ng.g⁻¹ to 1020 ng.g⁻¹ in the stream sediments ,. Comparing theses values with the background of the region (170 ng.g⁻¹ to 365 ng.g⁻¹) only two of the samples showed results above this background.. It was observed that when it comes to the availability of mercury to the aquatic environment and to the biota, 55% to 60% of the total mercury is potentially available in the oxidizable phase and 40% is inert in the residual phase. The mercury is not easily available in the exchangeable phase. The residual phase indicates the existence of a significant contribution of the regional litologia with natural mercury. Financial support: FAP- UERJ/ /FAPERJ(Brazil) - (E-26/171.519/99).