

## **FLUORIDE IN THE SPRING WATERS IN THE REGIONS OF QUATIS AND RESENDE, RIO DE JANEIRO STATE, BRAZIL**

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Samples of springs water, superficial soil and heavy minerals (pan concentrates) were collected and analysed for fluoride with the purpose of assisting the Buccal Health Program of the infantile population developed by the Odontology Faculty of Rio de Janeiro University. Objectifying to know the possible seasonal variations of the fluoride contents, the first campaign happened in the rainy period, summer (98/03) and the second in the fall (98/08). A third campaign was carried in 98/12 for validation of the data. Samples of the superficial soils were also collected in this last campaign. The collected samples were maintained under refrigeration until the moment of the analysis in laboratory. They were buffered with TSAB IV, and analyzed with sensitive electrode potentiometry model 720 A of Orion. The contents found in the first campaign varied from 0,01 to 0,79 mg.L<sup>-1</sup>. In the second campaign the concentrations varied from 0,46 to 0,48 mg.L<sup>-1</sup>, contrasting significantly of the values previously found. For confirmation of the data new campaign was carried in 04/12/98. The contents then found varied of 0,08 to 0,09 mg.L<sup>-1</sup>, smaller than the previously. The study of the mineralogical composition of the pan concentrates revealed that the only and possible fluorine bearing minerals presents were the biotite and the black turmaline. The results found in the superficial soils varied from 4,68 to 6,30 mg.L<sup>-1</sup>, indicating a fluoride readiness for the waters of recharge of the aquifers. The contents found are at the limits of the recommendation of World Health Organization. Financial support: RECOP/FAPERJ/FINEP(Brazil)(E-26/021021/98).