

Increasing mutagenicity of São Gonçalo Channel waters based on the *Allium cepa* test

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ABSTRACT. The São Gonçalo Channel is of great importance to the conservation of local biodiversity; it also is a water supply source of the city of Pelotas, Brazil, and the surrounding region. We examined the mutagenic activity of its waters. The following items were seasonally investigated in *Allium cepa* root radicular meristem cells: mitotic index, mitotic anomalies, interphase anomalies, and total anomalies. Water samples were collected from four different stations, Lock Dam, Santa Bárbara Channel, Pelotas Creek, and Barra do Laranjal. A drinking water negative control was used. For each sampling station, 8000 cells were counted, 2000 of which by repetition. The data were computed on a database (SPSS), and then analyzed by the chi-square test and the Mann-Whitney U-test. In 2005, the channel water provoked a significantly greater number of anomalies than the control water. The number of anomalies increased in 2007. This suggests that there was an increase in toxic substances in the channel over the years.

Key words: *Allium cepa*; Anomalies; Channel; Meristems; Mutagenicity