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PCBs in the atmosphere of King George Island, Antarctica.

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Abstract

Polychlorinated biphenyls (PCBs) are ubiquitous anthropogenic compounds found even in the polar regions, mainly due to long-range atmospheric transport. In order to assess the occurrence of atmospheric PCBs in the vicinity of the Brazilian Antarctic Research Station (62 degrees 05'S, 58 degrees 23'W), a sampling survey was undertaken in the austral summer of 1995-1996. The concentrations of the PCB congeners in the air ranged from not detected to 33.2 pgm(-3). The lower chlorinated congeners (PCB-101 and below), which are more volatile and subject to long-range transport, predominated in the air samples and represented 66.7% of the total PCB concentrations. Atmospheric levels of PCBs were correlated with meteorological conditions and the highest levels were associated with the passage of the frontal systems coming from South America