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URBAN ISOTOPE HYDROGEOLOGY I: A CASE STUDY OF GROUNDWATER AT THE UNIVERSITY OF SÃO PAULO CAPITAL CAMPUS, BRAZIL.

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ABSTRACT

Isotopic data from groundwater, rainfall, public water supply agency and geologic materials were obtained to characterize the isotopic signatures (O, H, Sr and Pb) of groundwater at the University of São Paulo capital campus. The data are important to understand the recharge mechanism in urban areas. The groundwater isotopic signatures show similar behavior to the water from the public supply company. The radiogenic isotopes (Sr and Pb) and the stable isotopes (O and H) indicate the same conclusion, as these four isotope groups showed very similar isotopic signatures for the rainfall and the public supply company. This pattern is distinct from the east zone of São Paulo City, which has a more impermeable surface. Anthropogenic contamination was also detected by the isotopic compositions and is corroborated by hydrochemistry analysis.