

TITLE: MICROBIOLOGICAL QUALITY OF WATER, BIOCHEMICAL PROFILE AND IDENTIFICATION OF ISOLATED BACTERIA OF TWO WETLANDS OF APA GUAJUVIRAS FARM (CANOAS – RS).

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ABSTRACT

The humid areas comprise several ecosystems, including the wetlands, which are strategic conservation sites, due to their high biological diversity and productivity that result from the relationships established between water, soil, vegetation and fauna. The Environmental Protection Area (APA) Guajuviras farm is located in the city of Canoas / RS and comprises about 560 ha, where different natural and anthropic environments are located. The objective of this study was to analyze the levels of contamination by heterotrophic bacteria and the coliform group, to trace the biochemical profile and to identify the bacterial isolates present in two wetlands of APA Guajuviras. For this purpose, collections were carried out in March 2015, each area being divided into four quadrants (north, south, east and west), from which samples of 250 mL of water were collected in sterile flasks, and at the time of collection the pH of the sample was checked. After sample processing and inoculation in standard Agar for counting by surface scattering, we selected colonies with distinct morphological characteristics and submitted to identification from the 16S rRNA gene sequencing. In the analysis of bacteria of the coliform group the Colilert® medium was used, according to the manufacturer's recommendations. The second area showed the highest results for both total and thermotolerant coliforms. In the quantification of heterotrophic bacteria, the highest results were obtained in the northern quadrant of area 1 and 2. Seventeen bacterial lines were isolated from the first area and nine from the second area. From the sequencing of the 16S rRNA gene it was possible to identify eight isolates, so far, from three types: *Bacillus* sp, *Pseudomonas* sp e *Serratia* sp, and two other species: *Lactococcus garvieae* e *Pseudomonas fluorescens*.

Keywords: biochemical profile, heterotrophic bacteria, gene 16S rRNA, wetlands.