



## Water quality monitoring by nanostructured films in a sensing unit system

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### ABSTRACT

Presented here is a study about the capability of a sensing unit to detect changes in river water quality. In order to determine its accuracy, water quality was monitored at 11 points along the Veado River in Presidente Prudente, Brazil. To have a basis for comparison, a water quality index (WQI) was developed following methods previously applied in different watersheds. Results showed an accurate relationship between WQI and electric impedance readings detected by the sensing unit. Principal components analysis (PCA) was used to derive results in a form that can be correlated with WQI calculated for each sample point, which showed the potential application of this device.

*Keywords:* Nanotechnology; Water quality; Thin films; Water quality index

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