



## **Assessment of Physicochemical and Microbiological Parameters of Drinking Water Samples from a South African Coal Mining Area**

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**ABSTRACT** Globally, water pollution is a critical problem which is inflicting serious damage on human health and the natural environment. In South Africa, many cases of water pollution have been reported. This paper assessed the physical, chemical and microbial properties of water from three locations in a coal mining region of South Africa. A mixed-methods approach involving quantitative analysis of water and qualitative (interviews of participants) was employed. Samples were taken from two secondary schools taps and a river. A total number of eleven parameters were assessed and analysed using different analytical methods. The values of each of analyzed parameters were later compared with the South African National Standard (SANS) for drinking water quality. The findings reveal that majority of the parameters conformed to the recommended guidelines while others were either at the threshold limit or present in greater concentrations. It is to be noted that long-term exposure of any of these in water can result in a number of harmful effects as discussed in the paper.