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***Application of MicroLab Resources in Rural Kenya Water Quality Testing***

Presently, there is little recurrent water testing performed on boreholes in the Khwisero sub-district of Western Kenya. A lack of financial resources and the rural nature of the area hinders local testing capabilities. Many of the boreholes are the sole sources of clean water for communities, yet their chemical safety cannot be continually ensured. Colorimetric determination may be a solution to water analysis in non-traditional lab settings. The MicroLab analytical device could be a rugged spectrophotometer option to perform this testing. This presentation proposes a method to perform colorimetric field testing and compares collected results with available historical data. Metrics were taken for seven wells that were constructed at primary schools throughout the Khwisero sub-district. Field measurements of nutrients, metals, turbidity were taken using the MicroLab device and software. Furthermore, an additional field review of the MicroLab device identifies some of the device challenges and overall obstacles with rural water testing.