

# **A new method for the determination of water quality**

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## **Abstract**

The aim of this study was to develop and test a novel screening method for determining water quality. We hypothesised that L-ascorbic acid would be a good indicator of water quality, due to its sensitivity to pollutants. We investigated the absorption spectra of L-ascorbic acid dissolved at different concentrations in water from different sources. We defined a water quality index (WQI) as the change in maximum L-ascorbic acid absorbance at 265 nm over two arbitrarily chosen time periods, i.e. between the 1<sup>st</sup> and 10<sup>th</sup> minutes and 1<sup>st</sup> and 20<sup>th</sup> minutes. We found that a high WQI value was significantly associated with low water quality, and vice versa. The proposed technique is a quick, simple and inexpensive method for obtaining a preliminary estimate of water quality.

**Keywords:** water quality, L-ascorbic acid, spectrophotometric method