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A comparison between Digital camera and Spectrophotometer for Sensitive and selective kinetic determination of Brilliant Green in Wastewaters

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Abstract

In this study, a simple and novel kinetic spectrophotometric method has been proposed for the sensitive and highly selective determination of Brilliant Green. The method is based on the interaction of Brilliant Green with Triton X-100 in micellar media at room temperature. As a result of this interaction, the peak wavelength (625nm) is gradually shifted toward longer wavelength region (634 nm) and more intensive hyper chromic effect has been seen. As well as, variations in the red, blue and green (RGB) component of the images as a function of time were observed. The kinetic interaction of Brilliant Green with Triton X-100 was recorded, using UV-Vis Spectrophotometer-diode array detector and a digital camera. The fixed-time method was used for the construction of a calibration curves. Brilliant Green can be measured in the range of 1.0 to 12.0 mg L^{-1} Download English Version:

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