

# Rotating disk sorbent extraction for pre-concentration of chromogenic organic compounds and direct determination by solid phase spectrophotometry

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A novel and very simple microextraction approach for pre-concentration and direct solid phase spectrophotometric measurement has been developed for the determination of chromogenic analytes. The model analyte to assess this approach was the chromophore malachite green (MG). The analyte was extracted from water samples onto a small rotating disk made of Teflon containing a sorbent phase of polydimethylsiloxane (PDMS) on one of its surfaces. We refer to the extraction procedure as rotating disk sorptive extraction (RDSE). After extraction, the sorbent phase with the concentrated analyte was separated from the Teflon disk and used directly for MG determination by solid phase spectrophotometry at 624. nm, without the necessity of a desorption step. Chemical and extraction variables such as concentration of sodium sulfate, pH, disk rotational velocity, extraction time, and temperature were studied in order to establish the best conditions for extraction. Under optimum conditions, the extrac