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# MONITORING THE BREAKDOWN OF DINOCAP IN SPIKED SOIL, WINE AND GRAPE SAMPLES BY GC/MS AND FTIR/ATR

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**Abstract**

Capillary gas chromatography coupled with mass spectrometry technique was used for the assessment of low concentration of dinitrophenol pesticide, Dinocap in different spiked samples. For this purpose it has been spiked with Dinocap (15- 200 µg/mL) five environmental matrices (a soil sample and two each samples of wine and grapes). The Dinocap degradation grade in these samples was also monitored. The extraction was performed in dichloromethane. The assessment of the Dinocap in the samples were also achieved by FTIR/ATR and reveals that after 18 days of pesticide application the recovery level of Dinocap decreased from 64% to 3% in grape, from 72% to 9% in soil, from 82% to 10% in wine at 18 days after pesticide application. The method described in this paper could be used for screening and identification of the named pesticide in other environmental samples with a spiking level as low as 2-20 µg/mL.

*Keywords:* dinitrophenol pesticide, dinocap, FTIR, GC/MS, wine

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