



## A Selective Spectrophotometric Determination of Metsulfuron Methyl with 4-Amino Azobenzene in Various Environmental Samples

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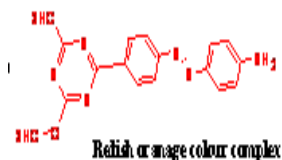
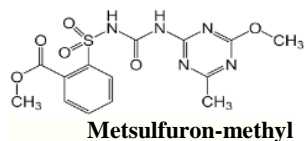
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### ABSTRACT

A simple and sensitive method for the determination of Metsulfuron methyl, a widely used herbicide is described here which is based on diazotization followed by coupling with 4-amino azobenzene in alkaline medium. The absorbance maxima of the coloured compound formed is measured at 490 nm. Beer's law is obeyed over the concentration range of 0.5-4.0 $\mu$ g in a final solution volume of 25mL. The Standard deviation and relative standard deviations are 0.0030 and 0.0919%. The molar absorptivity and Sandell's sensitivity were found to be  $0.0752 \times 10^6 \text{ L mol}^{-1} \text{ cm}^{-1}$  and  $0.0016 \mu\text{g cm}^{-2}$ , respectively. The method has been satisfactorily applied to the determination of Metsulfuron methyl in various environmental samples.

### Graphical Abstract



**Keywords:** Sensitive method, Metsulfuron methyl, 4-amino azobenzene, molar absorptivity.