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1-NITROSO 2 NAPHTHOL AS A SPRAY REAGENT FOR THE DETECTION OF CANNABIS ON THIN LAYER PLATES

A NUMBER of thin layer chromatographic procedures are described for the separation and detection of the active phenolic constituents of cannabis. Chromogenic reagents like fast blue salt B¹, Beam's reagent², diazotised *p*-nitroaniline-sodium hydroxide spray², blue tetrazolium³ and Folin-Ciocalteu phenol reagent are generally used to detect the separated phenolic constituents from cannabis. The Folin-Ciocalteu reagent gives blue spots with easily oxidisable substances in addition to phenols. Further, the diazo reagents¹ are found to react with many non-aromatic oxygen compounds to give red colour. Though fast blue salt B is widely used for the detection of cannabis, it was stated in earlier works⁵, that this reagent reacts with many compounds other than phenols and can hold no claim to specificity.

In the present work, therefore, a specific reagent for phenols has been used to detect the phenolic constituents cannabis. Many phenols are known to react with nitroso phenols in its isomeric oxime form in the presence of concentrated sulfuric acid, to give coloured indophenols⁶. Hence 1-nitroso 2 naphthol has been used as a spray reagent for the detection of cannabis and presented in this communication. The reagent is specific for phenols and non-phenolic compounds do not interfere.

Experimental

The cannabis sample has been extracted with three aliquots of benzene², which are decanted

through a short column of florasil (60-100 mesh). The extract was evaporated to a small volume, and spotted on thin layer plates of silica gel G. The plate is developed in a solvent mixture of benzene : chloroform (3 : 7). After the development the chromatograms are air dried and sprayed with 1% solution of 1-nitroso 2 naphthol, in concentrated sulfuric acid. On brief heating of the plates at 100° C, the colours are intensified. The results are given in Table I. The colours of the spots

TABLE I

Detection of the separated phenolic constituents of cannabis by spraying with 1-nitroso 2 naphthol reagent

Spot No.	R _f value	Colour with the spray reagent
1.	0.24	Blue
2.	0.51	Blue
3.	0.67	Blue
4.	0.91	Greyish blue
5.	0.94	Greyish blue

1, 2, 3 change to violet on standing for 2 hours. The reagent has been found to be effective in detecting cannabis samples extracted from admixtures and diluents like starch, jaggery, etc.

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