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DETERMINATION OF MENTHOL
IN MAINSTREAM SMOKE

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SUMMARY

A method for the quantitative determination of menthol in cigarette smoke and on filters has been developed. In this method twenty cigarettes are smoked onto a Cambridge filter which is then extracted with a hexane or carbon disulphide solution containing a known amount of internal standard. Gas chromatographic analysis is used to measure the concentration of menthol in the solution. Using this method a coefficient of variation of 4.5% was obtained.

The utility, reproducibility and limitations of the method have been examined by application to both laboratory and production samples.

The method was applied to determining the amount of menthol delivered per puff. Menthol level was found to increase with puff number. During the first three puffs the level increased rapidly and thereafter continued to increase but at a reduced rate. Many smokers claim they experience a decrease in menthol level during smoking, but it seems probable from these results that this effect is physiological.

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