



Bioactive compounds profiling in cultivated medical Cannabis



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INTRODUCTION

Cannabis sativa is plant used to treat various painful and pathogenic conditions. The main carriers of pharmacological effects in cannabis flowers are cannabinoids and terpenes. Cannabinoids have been used in the treatment of chronic pain, spasticity, seizure disorders, nausea, anorexia. Terpenes itself have a wide range of pharmacological actions, such as antifungal, antiviral, anti-inflammatory, antimicrobial, and act synergistically with cannabinoids in exhibiting a pharmacological effect.

AIM

The aim of this study was to determine cannabinoids content and terpenoid profile in dry cannabis flowers obtained from different THC-rich varieties of cannabis plant.

VERIFICATION OF THE ANALITICAL METHODS

Verification of HPLC/UV method for quantification of cannabinoids and GC/MS method for determination of terpenes in cannabis flowers was done to demonstrate that the analytical methods are suitable for intended analysis.

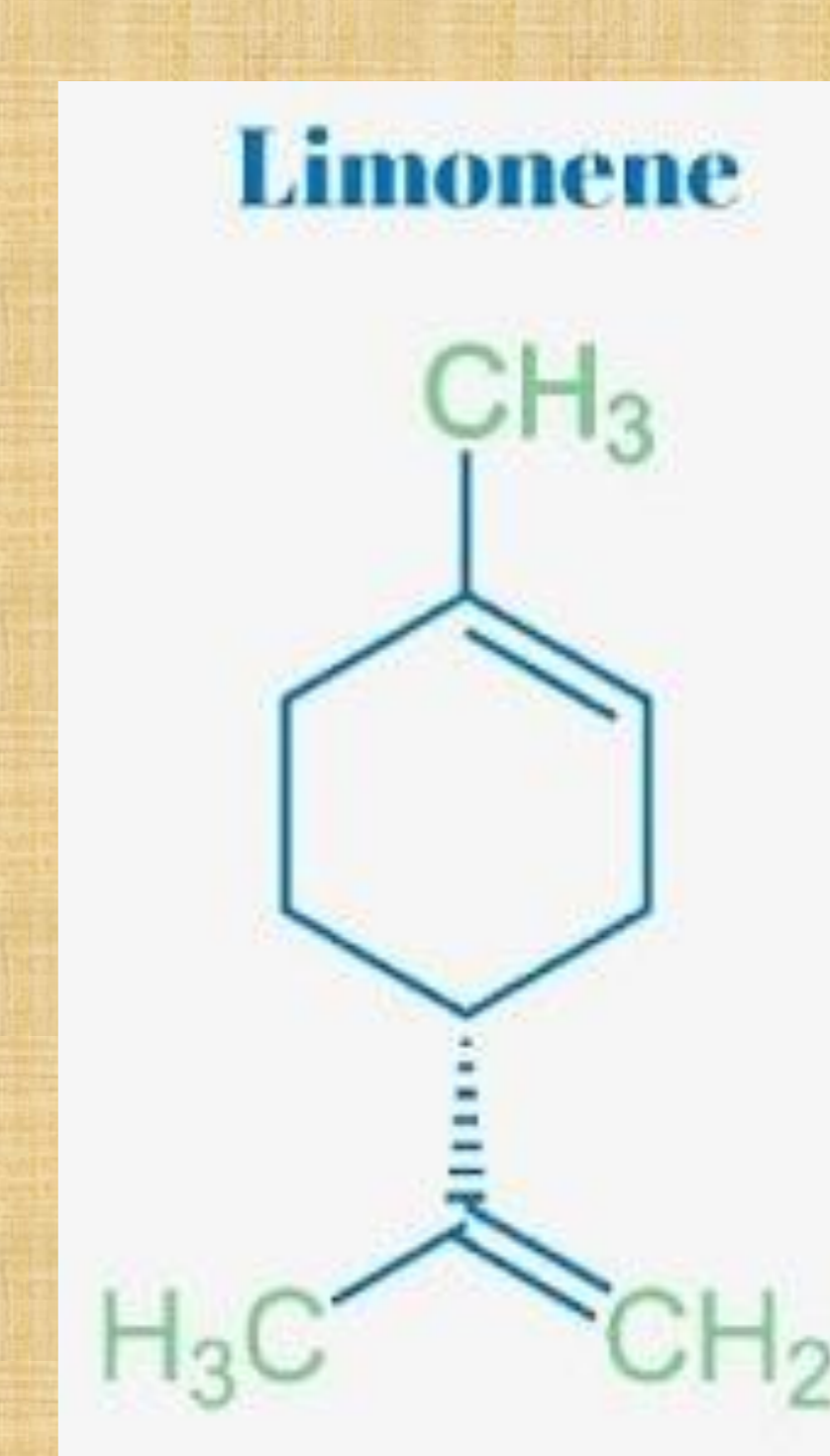
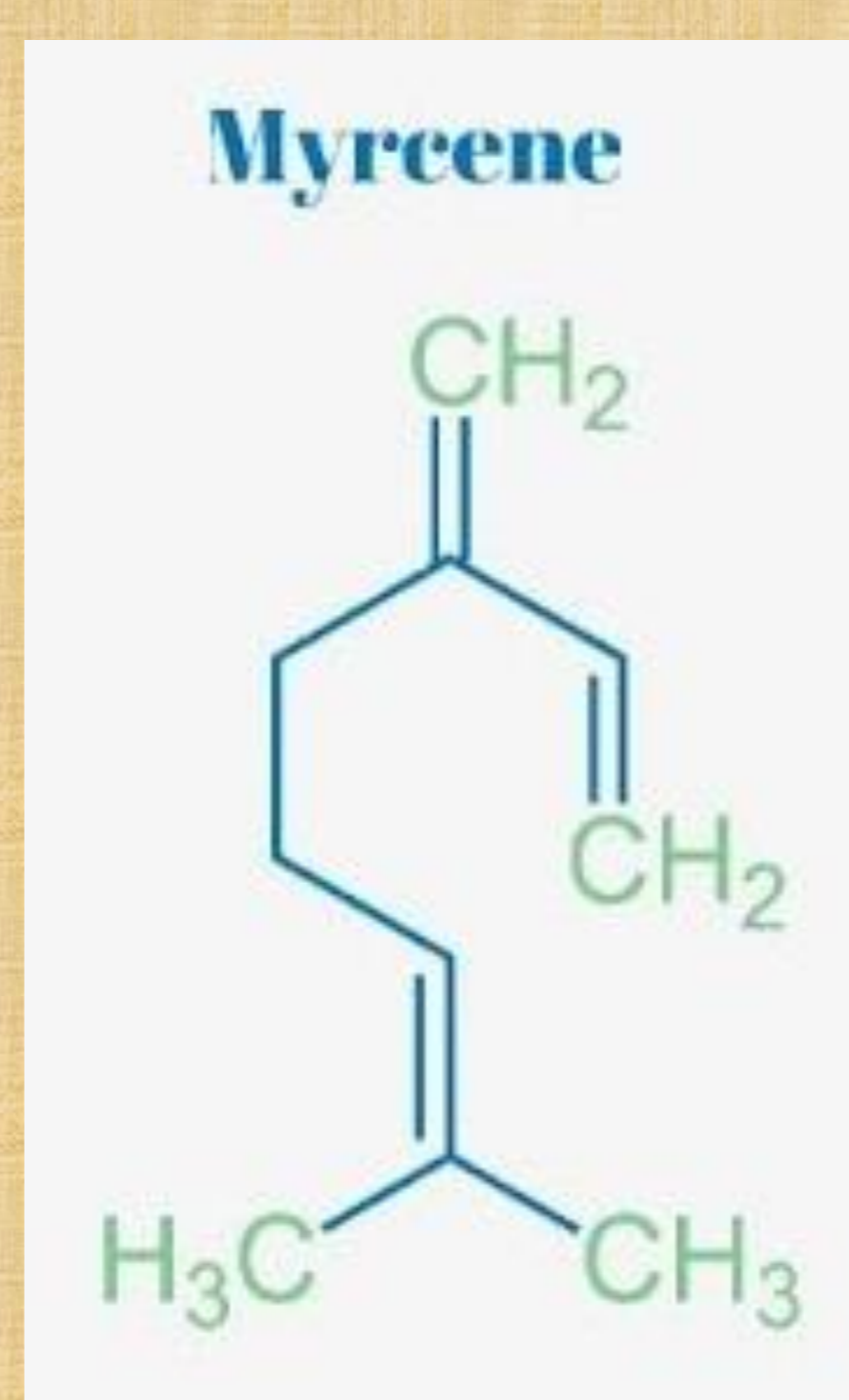


Variety	Lot.08032	Lot.110322	Lot.040222
Strawberry glue	Content of THC		
	21.46%	20.99%	21.96%
	Most common terpenes beta-Myrcene, d-Limonene, beta-Caryophyllene and alpha-Terpineol		

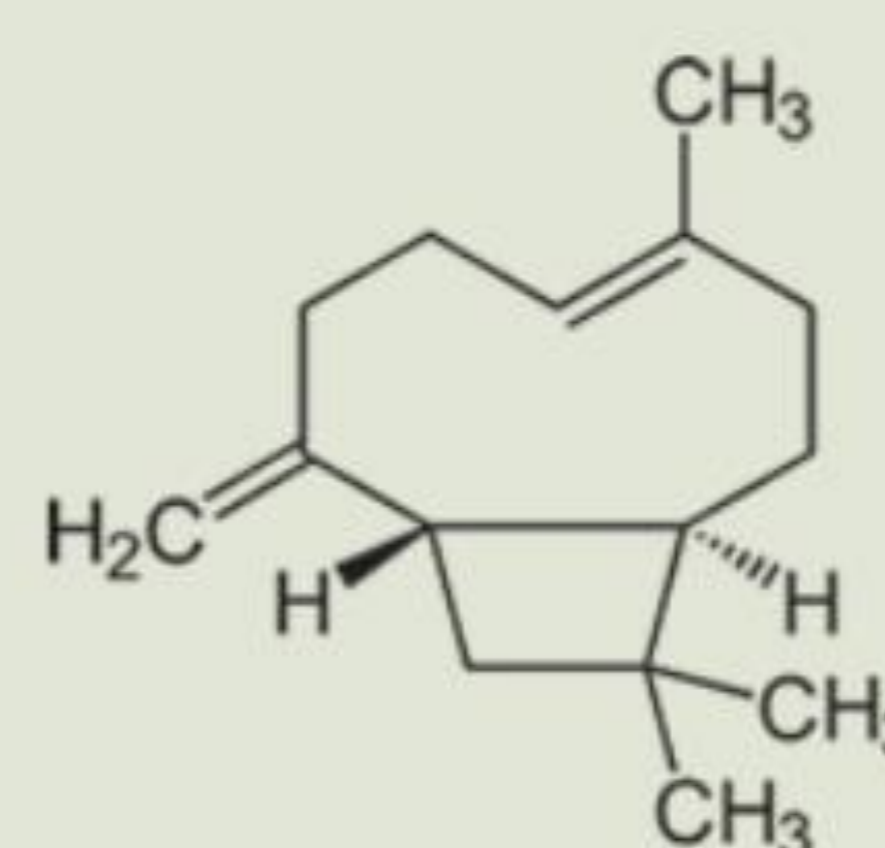
Variety	Lot.060222	Lot.120322	Lot.140422
French Cookies	Content of THC		
	22.17%	23.05%	22.55%
	Most common terpenes beta-Myrcene, d-Limonene, beta-Caryophyllene and alpha-Humulene		

Variety	Lot.070222	Lot.090322	Lot.110322
La Sage	Content of THC		
	21.34%	23.36%	21.99%
	Most common terpenes Terpinolene and beta-Caryophyllene and less represented, D-Limonene and beta Myrcene		

Terpenes



Beta-Caryophyllene



NATURAL CANNABINOIDS



THC

Cannabis sativa

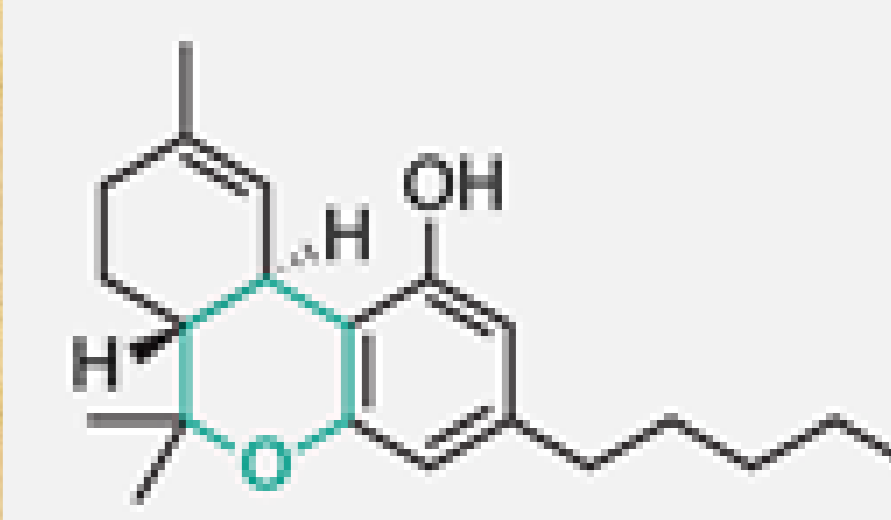


Table 1. Bioactive compounds profiling

CONCLUSION

The results obtained indicate that dry flowers derived from different cannabis varieties can be distinguished only by a terpenoid profile which is at the same time a fingerprint or a specificity that is characteristic of each variety.