## **Supporting Information**

## A comparative study of extraction methods and components identification of Teucrium chamaedrys and investigation of their antibacterial effect



Fig S1. Extraction by Hydrodistillation



Fig S2. Extraction by Microwave

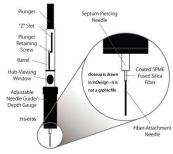


Fig S3. SPME culture

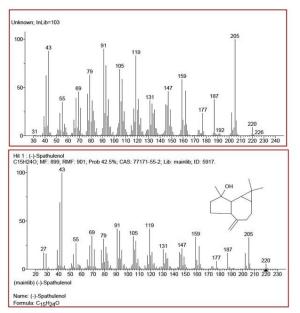


Fig S4. The mass spectrum obtained from the GC / MS device and the Spathulenol standard range

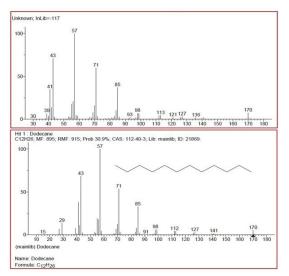


Fig S5. The mass spectrum obtained from the GC / MS device and the Dodecane standard range

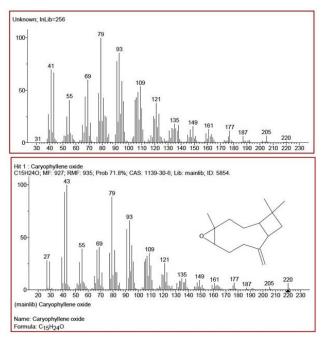


Fig S6. The mass spectrum obtained from the GC / MS device and the standard Caryophyllene oxide spectrum

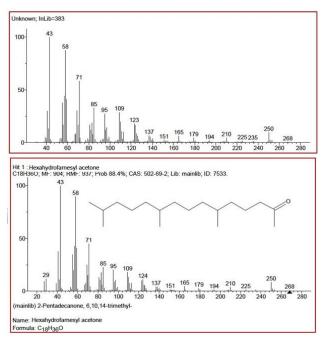


Fig S7. The mass spectrum obtained from the GC / MS device and the standard Hexahydrofamesly Acetone

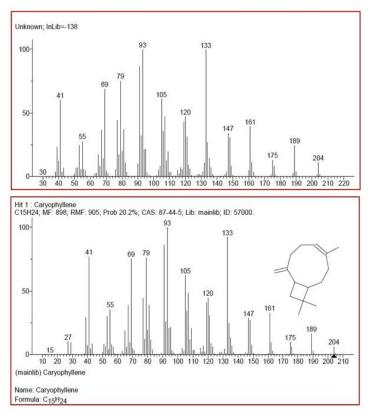


Fig S8. The mass spectrum obtained from the GC / MS machine and the standard Caryophyllene spectrum

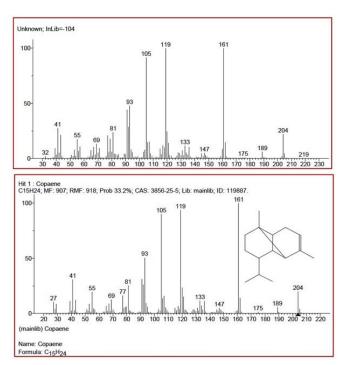
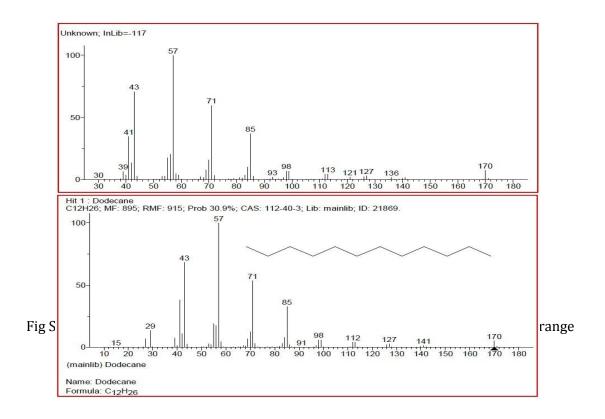


Fig S9. The mass spectrum obtained from the GC / MS device and the Copaene standard range



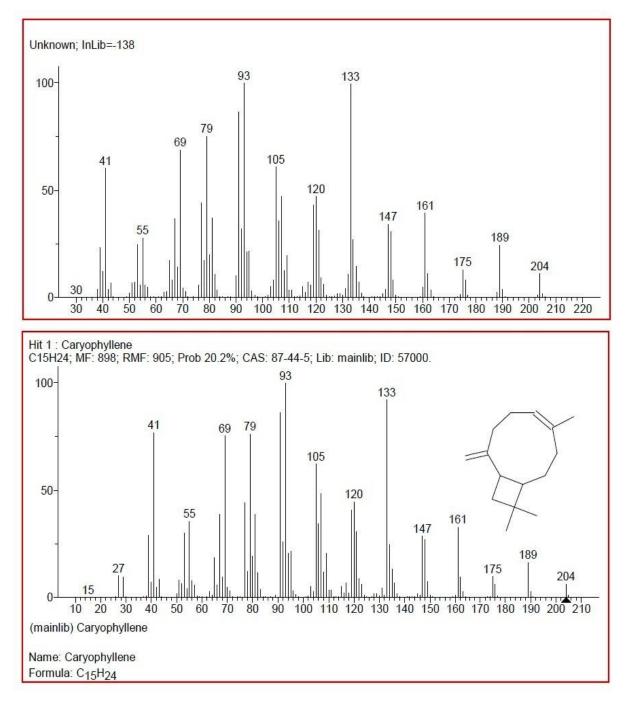


Fig S11. The mass spectrum obtained from the GC / MS machine and the standard

Caryophyllene spectrum

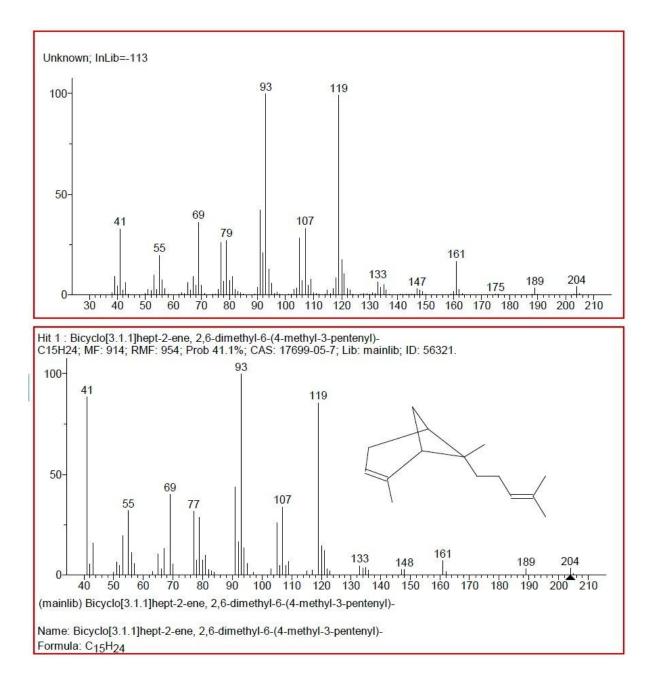


Fig S12. shows the mass spectrum obtained from the GC / MS and the standard range of Bicyclo [3.1.1] hept-2-ene, 2,6-dimethyl-6- (4-methyl-3-pentenyl) -

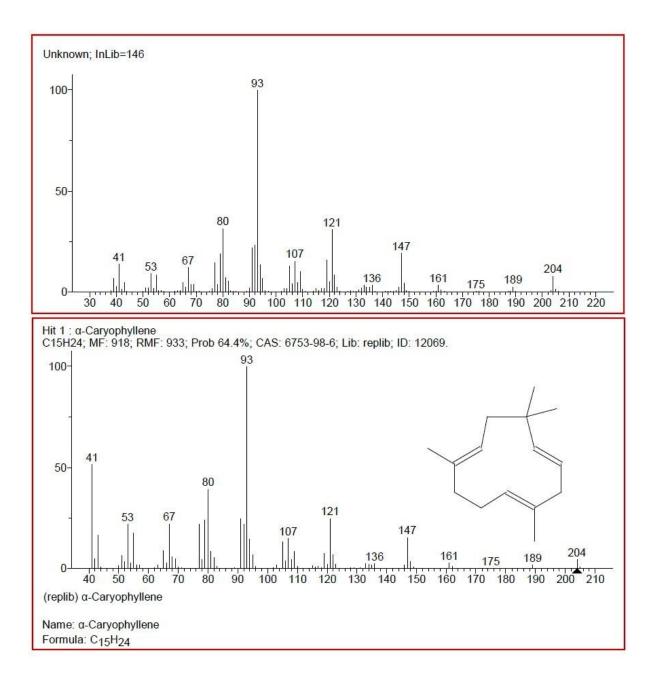


Fig S13. The mass spectrum obtained from the GC / MS device and the standard  $\alpha\text{-}$  Caryophyllene spectrum

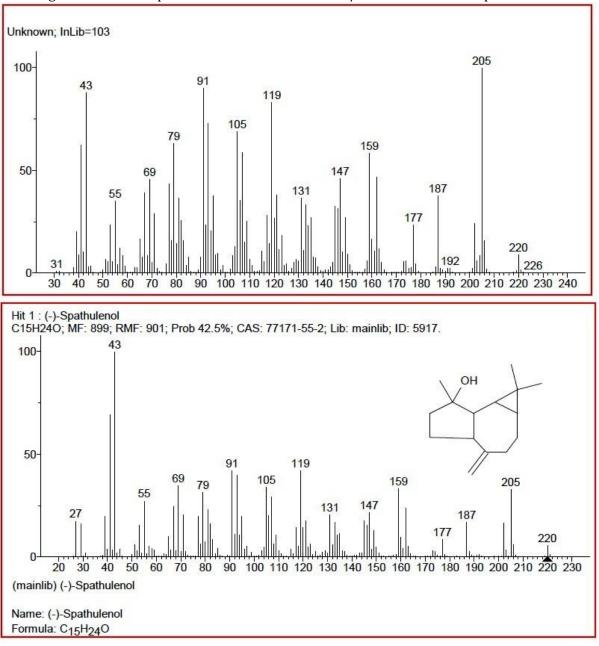


Fig S14. The mass spectrum obtained from the GC / MS device and the Spathulenol standard

range

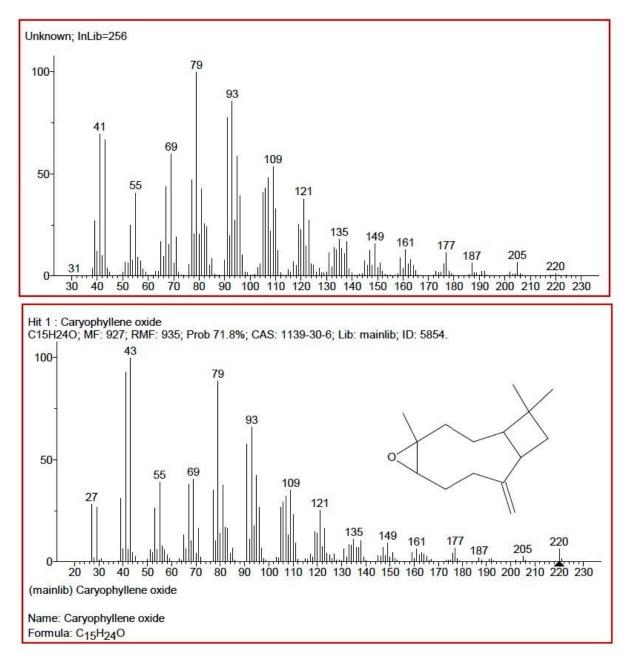


Fig S15. The mass spectrum obtained from the GC / MS device and the standard range of Caryophyllene oxide

GC	HP-6890-HEWLETT PACKARD	
Column Type	HP-5MS (5% phenyl di methyl siloxan)	
Column dimensions	The length of 30 m, the diameter of 25.0 mm and film	
	thickness 32.0 microns	
Planning temperature pillars	Initial temperature 60 ° C (3 min), temperature	
	gradient (° C) / min 5, final temperature 220 ° C	
Injection site	Split/split less (Ratio 1 to 20)	
Infusion temperature	250 °C	
Gas carrier	Helium 999.99% with flow rate of 1 ml / min	
Mass	HP-5973-HEWLETT PACKARD	
Ion energy	70 Electron volts	
Ion chamber temperature	230 degrees centigrade	
Mass parser	Quadruple	
Mass parser temperature	150 degrees centigrade	

Table S1: Specifications and Condition of the GC-MS Machine Used to Analyze Essential Oils

Table S2: Specifications of bacteria prepared for the analysis of essential oils

	ATCC	PTCC
Escherichia Coli	10536	1338
Staphylococcus Aureus	6538	1112