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Chemical analysis of essential oil of cultivated *Crithmum maritimum*

Method of analysis: Gas Chromatography–Mass Spectrometry (GC–MS) analysis

Analysis of essential oil: Essential oil analyses was performed on a Shimadzu GC-2010-GCMS-QP2010 system operating at 70eV. This was equipped with a split/splitless injector (230 °C) and a fused silica HP-5 MS capillary column (30 m x 0.25 mm i.d., film thickness 0.25 μm). The temperature program was from 50 °C to 290 °C, at a rate of 4 °C/min. Helium was used as a carrier gas at a flow rate of 1.0 mL/min. Injection volume of each sample was 1.0 μL. The identification of the components was based on comparison of their mass spectra with those of NIST21 and NIST107, and by comparison of their retention indices with literature data. Essential oils were often subjected to co- chromatography with authentic compounds (Fluka, Sigma).

CHEMICAL COMPOSITION (%) OF ESSENTIAL OIL OF *Origanum dictamnus*

| COMPOUNDS | % |
|---------------------------------|----------|
| α -Thujene | 2.76 |
| α -Pinene | 1.44 |
| Camphene | 0.32 |
| β -Pinene | 0.61 |
| 1-Octen-3-ol | 0.66 |
| β -Myrcene | 3.86 |
| 3-Octanol | 0.20 |
| α -Phellandrene | 0.53 |
| α -Terpinene | 3.92 |
| p-Cymene | 11.67 |
| Sylvestrene | 0.96 |
| Eucalyptol | 0.09 |
| β - <i>trans</i> -Ocimene | 0.12 |
| γ -Terpinene | 24.20 |
| <i>cis</i> -Sabinenehydrate | 1.39 |
| <i>trans</i> -Sabinenehydrate | 0.25 |
| Linalool | 1.43 |
| Borneol | 0.39 |
| 1-Terpinen-4-ol | 0.50 |
| α -Terpineol | 0.09 |
| Thymol methyl ether | 0.21 |
| Thymol | 0.14 |
| Carvacrol | 37.54 |
| α -Cubebene | 0.26 |
| α -Cubebene | 0.12 |
| Copaene | 1.98 |
| Caryophyllene | 2.32 |
| α -Caryophyllene | 0.14 |
| Germacrene D | 0.17 |
| β -Bisabolene | 0.37 |

CHEMICAL COMPOSITION (%) OF ESSENTIAL OIL OF *Cistus creticus*

| COMPOUNDS | % |
|-------------------------------|----------|
| Tricyclene | 2.23 |
| α -Pinene | 31.28 |
| Camphene | 12.49 |
| β -Pinene | 7.33 |
| β -Myrcene | 0.38 |
| α -Terpinene | 0.32 |
| p-Cymene | 0.55 |
| D-Limonene | 1.56 |
| γ -Terpinene | 0.67 |
| Nonanal | 0.64 |
| L-trans-Pinocarveol | 0.26 |
| Borneol | 0.63 |
| 1-Terpinen-4-ol | 1.22 |
| α -Terpineol | 0.40 |
| Linalool acetate | 0.21 |
| α -Cubebene | 4.56 |
| Ylangene | 0.24 |
| Copaene | 3.67 |
| β -bourbonene | 0.67 |
| Germacrene D | 0.68 |
| 2',2''-Dihydro-.alpha.-ionone | 0.55 |
| Caryophyllene | 2.58 |

CHEMICAL COMPOSITION (%) OF ESSENTIAL OIL OF *Origanum majorana*

| COMPOUNDS | % |
|-------------------------------|----------|
| α -Thujene | 1.89 |
| α -Pinene | 0.77 |
| Sabinene | 9.61 |
| β -Myrcene | 2.01 |
| α -Phellandrene | 0.48 |
| α -Terpinene | 6.32 |
| p-Cymene | 2.55 |
| β -Phellandrene | 4.21 |
| γ -Terpinene | 10.95 |
| <i>cis</i> -Sabinenehydrate | 5.82 |
| Terpinolene | 2.19 |
| <i>trans</i> -Sabinenehydrate | 16.23 |
| Linalool | 1.25 |
| 1-Terpinen-4-ol | 17.17 |
| α -Terpineol | 3.58 |
| Dihydrocarvone | 0.54 |
| <i>trans</i> -Piperitol | 0.37 |
| Solanone | 3.19 |
| Linalool acetate | 2.98 |
| Caryophyllene | 2.04 |
| γ -Elemene | 0.85 |
| Spathulenol | 0.16 |

Compounds listed in order of elution from an HP-5 MS capillary column;

I am at your disposal for any additional information.

Yours sincerely,



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