บริษัท วิสไบโอ จำกัด สาขา: ห้อง 7910 ภาควิชาวิศวกรรมอุตสาหการ มหาวิทยาลัยเกษตรศาสตร์เลขที่ 50 ถนนงามวงศ์วาน แขวงลาดยาว เขตจตุจักร กรุงเทพฯ 10900 สำนักงานใหญ่: 8/24 ซอยนาวงประชาพัฒนา 6 ถนนนาวงประชาพัฒนา แขวงสีกัน เขตดอนเมือง กทม. 10210

Test Report

Sample Name SFTY-2504-001

Product Form Oil

Physical Characteristics Viscous liquid

Sample Received Date April 21, 2025



Procedure

Screening Profile Testing Using SBSE with GC-MS/MS Method and Identification by NIST Library

Results and Conclusion

The analysis of the chemical compounds in the sample SFTY-2504-001 is presented in Table 1. Furthermore, the results obtained from GC-MS/MS analysis of the sample are illustrated in the chromatographic profile shown in Figure 1, which displays the Total Ion Chromatogram (TIC) with notable peaks corresponding to different retention times.

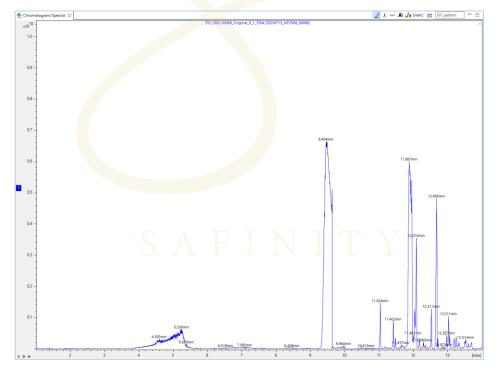


Figure 1 Chromatography

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(Laboratory Officer)

Reviewed by:

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ชลธิชา สุวัฒนะโสภณ (Technical Manager)



Table 1 Chemical Compounds in Sample SFTY-2504-001

| Name | Retention time (min) | Odor Characteristics | Biological Properties |
|---|-------------------------|-----------------------------|---|
| Benzaldehyde | 4.593 | Nutty, almond-like, | Used as an anti-cancer agent (delays/inhibits tumor growth) |
| 1-Methoxy-3,3-dimethyl-1- phenylbutan-2-ol | 6.519 | - | |
| 2-methoxy-2-phenyl-2-(N- phenylcarbamoyl)acetic acid | 6.765 | Woody, smoky, burnt | - |
| Acetophenone | 7.086 | Sweet-warm, | Used in perfumes, flavoring agent for food/beverages |
| 2-Benzoyl-4H-1,3-benzothiazine | 7.215 | - | Antibacterial, antifungal, antitumor, antimalarial, anticancer, antiviral, and anti-inflammatory activities |
| Benzenemethanol, $lpha$,4-dimethyl- | 8.459 | Fruity | - |
| 2-Butanone, 4-phenyl- | 9.454 | Sweet | Used in the development of analgesic and anti-inflammatory drugs |
| 1-Allyloxy-1-ethynyl-2- isopropylidene-5- methylcyclohexane | 9.641 | - | - |
| 2-(Trifluoromethyl)-2-(4- methylphenoxy)oxirane | 9.803 | - | Used in the treatment of various medical conditions |
| 1-butylhexylbenzene | 9.964 | - | - |
| 1-Methoxypentadeca-1,3-dien-5-ol | 10.468 | - | - |
| 2,3,5-Trimethylenehexane | 11.025 | Woody, earthy, | r v |
| Lyratyl acetate | 11.156 | Sweet, floral and fruity | Prevents acne-causing microorganisms |
| 1-Allyltricyclo[4.1.0(2,7)] heptane | 11.160 | - | - |
| trans-Caryophyllene | 11.402 | Woody, clove-like | Neuroprotective, analgesic, antiasthmatic |

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| Name | Retention time (min) | Odor Characteristics | Biological Properties |
|---|----------------------|--|---|
| 3-(2-Chloro-2-methylpropyl)-1- cyclopentene | 11.465 | - | - |
| 1,2,7-Octatriene | 11.637 | Fruity, floral | Antibacterial, anti-inflammatory, potential for treating gastric ulcers |
| 1,1-Dicyclopropyl-2-methyl-1-butene | 11.981 | Pleasant aromatic scent | - |
| 1-Methylene-2b-hydroxymethyl-3,3-dimethyl-4b-(3-methylbut-2-enyl)-cyclohexane | 12.021 | - | Antimicrobial, antioxidant, anti- inflammatory properties |
| 4-Isopropyl-1-methyl-4-(3'-methylbut-3'-enyl)cyclohex-1-ene | 12.073 | Monoterpene (important for floral scent) | - |
| Longipin-9-ene-14,15-diol | 12.280 | - | - |
| 1,2,3-Trimethyl-1-(3'-phenyl-2- propenyl)indene | 12.392 | Camphor-like, fruity, musty, cedar-like | - |
| 1H-Cyclopropa[a]naphthalene, 1a,2,6,7,7a,7b-hexahydro-1,1,7,7a- tetramethyl-, (1aR, 7R,7aR, 7bS)- | 12.511 | | - |
| 3'-Phenyl-5'-(2-hydroxyethyl)- spiro[adamantane-2,2'-(1,3)- dithiolane]-4'-one | 12.697 | - | - |
| 2,3,5,8,10,11- Hexamethylenedodecane | 12.875 | Fresh wood, amber | Essential oils generally help regulate mood, reduce anxiety and pain, reduce inflammation |
| β-Carylphyllene(trans-[[1R-(1Q*,4E,9S*]-4,11,11-Trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene]) | 12.958 A | Woody, clove-like | Antidepressant, neuroprotective, analgesic |
| (E)-1-bromo-3-nonyn-1-ene | 13.011 | Green, waxy, fatty | - |
| 2,3-dimethyl-3-(3- methylphenyl)cyclopentan-1-one | 13.043 | Sandalwood-like, intense floral | - |

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| | Retention | | |
|--|-----------|------------------------|---|
| Name | time | Odor Characteristics | Biological Properties |
| | (min) | | |
| $oldsymbol{eta}$ -Gurjunene | 13.108 | Unique fragrance of | Antianxiety, antidepressant, |
| | | Dipterocarpaceae wood | antimicrobial, anti-inflammatory |
| 1-bicyclo[1.1.1]pent-1- | 13.403 | Benzene-like aromatic | Used as a bio-isostere in drug |
| ylbicyclo[2.2.2]octane | | | development |
| (1S,2R,4S)-N-Benzyl-2-hydroxy-7,7- | | - | Compounds associated with anxiety reduction |
| dimethylbicyclo[2.2.1]hept-1- | 13.591 | | |
| ylmethanesulfonamide | | | |
| (E)-5-(3-Furanyl)-2-methyl-2-penten-4- | 13.678 | C 1 f l:l | |
| yn-1-ol | 13.078 | Green, leaf-like, waxy | - |

Remark

This test report is only applicable to the samples tested in the laboratory.

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