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# GC-MS ANALYSIS OF PHYTOCONSTITUENTS IN *FICUS MOLLIS* VAHL LEAVES

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## ABSTRACT

*Ficus mollis* Vahl is an important medicinal plant belongs to family Moraceae. The leaf extract of this plant in different solvents were analyzed for different phytochemicals. It shows presence of different phytochemicals like carbohydrates, phenol, tannins, proteins, amino acids, anthocyanin, saponin, flavonoid anthraquinones and cardiac glycosides. The analysis of the volatile compounds in the methanolic leaf extract was performed using GC-MS. About 100 compounds were reported out of which ten compounds are major while others are minors. The major compounds include Deoxyspergualin (7.79%), ç-Sitosterol (7.05%), Cyclopentasiloxane, decamethyl- (5.07%), dl-à-Tocophero (4.25%), 2,2,4-Trimethyl-3-(3,8,12,16-tetramethyl-heptadeca-3,7,11,15 tetraenyl)-cyclohexanol (2.75%), à-Amyrin (2.43%), 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- (2.41%), Phytol (2.39%), 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- (2.31%) and Cyclohexasiloxane, dodecamethyl- (2.12%).

**KEYWORDS:** *Ficus mollis* Vahl, GC-MS analysis Phytoconstituents.

## INTRODUCTION

Ficus mollis Vahl. locally known as Sonpakhad is an important medicinal plant belongs to family Moraceae. It is deciduous, epiphytic or independent tree grow up to 15 m in height. Plant branchlets covered with yellow velvety hairs. Leaves alternate elliptic-ovate shaped, 4-16cm long ,3-9 cm wide with 5-8 cm long stalk. Figs occur in leaf axils, either in pairs or in clusters. They are stalk less, round, up to 8 mm across. For centuries, F. mollis have been used extensively in India and Nepal to treat wounds and various diseases. Local tribes use this plant to initiate or to increase lactation after delivery of women. The anti bacterial,[1] hepato protective,[2] anti oxidant,[3] and heavy metal analysis,[4] of Ficus mollis has been reported. The present research work was undertaken to perform phytochemical analysis Ficus mollis Vahl leaves and GC-MS study so as to determine the possible volatile compounds in the methanolic leaf extract. In the present research GC-MS analysis of leaf extract in methanol is reported. Total 100 active chemical compounds were analyzed.

## MATERIAL AND METHODS

### Collection of plant material

Plant was collected from the forest region of Chimur Tahsil, Chandrapur District, Maharashtra, India.

### Preparation of Powder and Extract

The leaves were shade dried for two to four weeks. After drying, it was grinded and stored in airtight container. The air dried bark powder (20g) was successively extracted by Soxhlet extraction with methanol solvent. The extracts were dried and stored in a sterile container for further use.

### Phytochemical Screening

Phytochemical analysis of leaf extract for different groups in various solvent was performed by using standard protocols adopted by the various workers.[5-11]

### Gas Chromatography-mass Spectrometry (GCMS) Analysis

The analysis of the volatile compounds in the methanolic leaf extract was performed using a THERMO TRACE 1300 GC, equipped with a TG 5MS capillary column (30 m × 0.25 mm, 0.25µm) and a MSTSQ 8000 mass selective detector. Injector S/SL was used. For GC-MS detection an electron ionization system with ionization energy of 70 eV was used and Ion source temperature was 230°C. Helium was the carrier gas, at a flow rate of 1 ml/min. The oven temperature program was 60°C (2 min), then 10°C/min to 280°C (10 min). Injector and MS transfer line temperature were set at 250°C and 280°C respectively. The diluted samples (1/100 in methanol, v/v) of 1 µl have injected manually in the split less mode. The components were identified based on the comparison of their relative retention time and mass spectra with those of standards (identification based on 80% hit), NIST library data of the GC-MS system and literature data.

## RESULT AND DISCUSSION

The phytochemical analysis of leaf extracts of *Ficus mollis* Vahl. in different solvents is shown in Table-1. It shows the presence of chemicals like carbohydrates, phenol and tannins in the extract of solvent ethyl acetate, acetone, methanol and water. Proteins & amino acids and anthocyanin were observed in methanol and water extract. The fixed oils and fats were observed in all the solvent extract. Saponins were found in the water extract whereas alkaloids were found in methanol extract. Except water sterol and flavonoids were present in all the solvent extracts. All extract shows the negative test for terpenoids. Anthraquinones were extracted in ethyl acetate, methanol and water. Cardiac glycosides were observed in petroleum ether, chloroform and ethyl acetate. The presence of alkaloids, tannins, saponins, flavonoids, steroids and terpenoids in methanol extract was reported by V Priya and G Abinaya.[12] All these constituents are reported to exhibit strong antioxidant scavenging activity for the radicals involved in the lipid peroxidation.[13-14] In addition, these phytoconstituents play a vital role in the treatment of different diseases such as tannins possess anti-inflammatory and anticancer activity.[15-16] flavonoids are known to be antioxidant, anti-inflammatory and anticancer agents.[17,19]

**Table 1: Phytochemical Screening of *Ficus mollis* Vahl. (Leaves).**

| Sr. No | Chemical Constituents | Test | Petroleum ether (60-80°C) | Chloroform (61.2°C) | Ethyl Acetate (77.1°C) | Acetone (56°C) | Methanol (64.7°C) | Water (100°C) |
|---|---|---|---|---|---|---|---|---|
| 1 | Carbohydrates | Molisch's test | - | - | + | + | + | + |
| | | Fehling's test | - | - | + | + | + | + |
| | | Benedict's test | - | - | + | + | + | + |
| 2 | Protein and amino acids | Millon's test | - | - | - | - | + | + |
| | | Biuret test | - | - | - | - | - | - |
| | | Ninhydrin test | - | - | - | - | - | - |
| 3 | Fixed oils and fats | Stain test | + | + | + | + | + | - |
| | | Saponification test | - | - | - | - | - | - |
| | | Sudan test | - | + | - | - | + | + |
| | | Test for Glycerol | + | + | - | - | - | - |
| 4 | Saponins | Foam Test | - | - | - | - | - | + |
| | | Froth Test | - | - | - | - | - | + |
| 5 | Sterols | Salkowaski test | - | - | + | + | + | - |
| | | Liebermann Burchard test | + | + | + | + | + | - |
| 6 | Terpenoids | Test for Terpenoids | - | - | - | - | - | - |
| 7 | Alkaloids | Mayer's test | - | - | - | - | - | - |
| | | Hager's test | - | - | - | - | - | - |
| | | Wagner's test | - | - | - | - | + | - |
| | | Dragendorff's test | - | - | - | - | - | - |
| 8 | Phenols | Ferric chloride test | - | - | + | + | + | + |
| | | Liebermanns test | - | - | - | - | - | - |
| 9 | Tannins | Lead Acetate test | - | - | + | + | + | + |
| | | Ferric chloride test | - | - | + | + | + | + |
| 10 | Flavonoids | Lead Acetate test | + | + | + | + | + | - |
| | | Shinoda test | + | + | + | + | + | - |
| | | Alkaline Reagent test | - | - | - | - | - | - |
| 11 | Anthocyanin | Dilute Hcl acid test | - | - | - | - | + | + |
| 12 | Anthraquinones | Borntragger's test | - | - | + | - | + | + |
| 13 | Cardiac Glycosides | Kellar Killiani test | + | + | + | - | - | - |

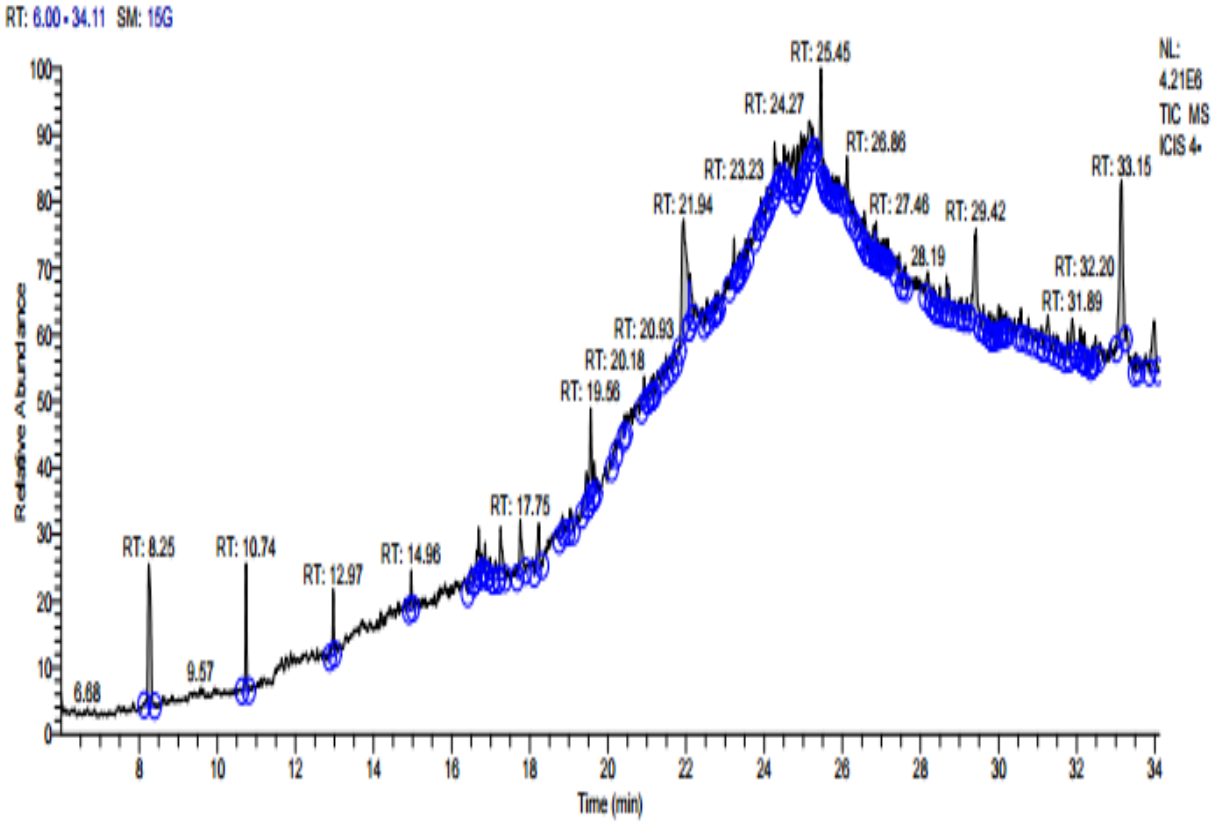


**Figure 1: Chromatogram of GC-MS analysis of methanol leaves extract of *Ficus mollis* Vahl.**

**Table 2: Different phytocomponents identified from the methanol leaves extract of *Ficus mollis* Vahl. by GC-MS.**

| Sr. no | Retention Time (RT) | Peak Area (%) | Name of the Compounds | Molecular Formula |
|---|---|---|---|---|
| 1. | 8.25 | 5.07 | Cyclopentasiloxane, decamethyl- | $C_{10}H_{30}O_5Si_5$ |
| 2. | 10.74 | 2.12 | Cyclohexasiloxane, dodecamethyl- | $C_{12}H_{36}O_6Si_6$ |
| 3. | 12.97 | 1.16 | Cyclooctasiloxane, hexadecamethyl- | $C_{14}H_{42}O_7Si_7$ |
| 4. | 14.96 | 0.64 | Cyclooctasiloxane, hexadecamethyl- | $C_{16}H_{48}O_8Si_8$ |
| 5. | 16.50 | 0.67 | (22S)-6à,11á,21-Trihydroxy-16à,17à-propylmethyle nedioxypregna-1,4-diene-3,20-dione | $C_{25}H_{34}O_7$ |
| 6. | 16.69 | 1.45 | Cyclononasiloxane, octadecamethyl- | $C_{18}H_{54}O_9Si_9$ |
| 7. | 16.77 | 0.52 | 5H-Cyclopropa[3,4]benz[1,2-e]azulen-5-one, 9,9a-bis(acetyloxy)-3-[(acetyloxy)methyl]-2-chloro1,1a,1b,2,3,4,4a,7a,7b,8,9,9a-dodecahydro-3,4a,7b-t rihydroxy-1,1,6,8-tetramethyl-, [1aR-(1aà,1bá,2à,3à,4aá,7aà,7bà,8à,9á,9aà)]- | $C_{26}H_{35}ClO_{10}$ |
| 8. | 16.85 | 0.49 | Ethanol, 2-(9-octadecenyloxy)-, (Z)- | $C_{20}H_{40}O_2$ |
| 9. | 16.98 | 0.54 | Dasycarpidan-1-methanol, acetate (ester) | $C_{20}H_{26}N_2O_2$ |
| 10. | 17.12 | 0.62 | Tetraacetyl-d-xylonic nitrile | $C_{14}H_{17}NO_9$ |
| 11. | 17.25 | 1.73 | Phthalic acid, butyl hept-4-yl ester | $C_{19}H_{28}O_4$ |
| 12. | 17.75 | 1.89 | Pentadecanoic acid, 13-methyl-, methyl ester | $C_{17}H_{34}O_2$ |
| 13. | 18.23 | 1.50 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 14. | 18.83 | 0.64 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 15. | 19.04 | 0.65 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 16. | 19.45 | 1.27 | Ethyl iso-allocholate | $C_{26}H_{44}O_5$ |

| | | | | |
|---|---|---|---|---|
| 17. | 19.56 | 2.39 | Phytol | $C_{20}H_{40}O$ |
| | | | 1-Hexadecen-3-ol, 3,5,11,15-tetramethyl- | $C_{20}H_{40}O$ |
| | | | Isophytol, acetate | $C_{22}H_{42}O_2$ |
| 18. | 19.65 | 0.71 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 19. | 20.18 | 0.54 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 20. | 20.43 | 0.29 | 2-Myristynoyl pantetheine | $C_{25}H_{44}N_2O_5S$ |
| 21. | 20.93 | 0.92 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 22. | 21.11 | 0.39 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 23. | 21.16 | 0.37 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 24. | 21.49 | 0.56 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 25. | 21.69 | 0.42 | 9,12,15-Octadecatrienoic acid, 2-[(trimethylsilyl)oxy]-1-[[(trimethylsilyl)oxy]methy l]ethyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 26. | 21.94 | 7.79 | Deoxyspergualin | $C_{17}H_{37}N_7O_3$ |
| 27. | 22.10 | 1.41 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 28. | 22.54 | 0.49 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 29. | 22.75 | 0.30 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 30. | 22.81 | 0.22 | à-D-Glucopyranoside, methyl 2-(acetylamino)-2-deoxy-3-O-(trimethylsilyl)-, cyclic methylboronate | $C_{13}H_{26}BNO_6Si$ |
| 31. | 23.23 | 1.50 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 32. | 23.33 | 0.28 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 33. | 23.37 | 0.37 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 34. | 23.53 | 0.48 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 35. | 23.84 | 0.84 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 36. | 23.92 | 0.67 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 37. | 24.07 | 0.38 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 38. | 24.18 | 0.66 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 39. | 24.27 | 1.50 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 40. | 24.39 | 0.29 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 41. | 24.51 | 0.66 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 42. | 24.62 | 1.44 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 43. | 24.76 | 2.41 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 44. | 24.86 | 1.12 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 45. | 24.94 | 1.45 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 46. | 25.02 | 1.04 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 47. | 25.15 | 2.31 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |

| | | | | |
|---|---|---|---|---|
| 48. | 25.24 | 0.46 | 5H-Cyclopropa[3,4]benz[1,2-e]azulen-5-one, 9,9a-bis(acetyloxy)-1,1a,1b,2,4a,7a,7b,8,9,9a-decahy dro-2,4a,7b-trihydroxy-3-(hydroxymethyl)-1,1,6,8-te tramethyl-, [1aR-(1aà,1bá,2á,4aá,7aà,7bà,8à,9á,9aà)- | $C_{24}H_{32}O_9$ |
| 49. | 25.45 | 2.75 | 2,2,4-Trimethyl-3-(3,8,12,16-tetramethyl-heptadeca-3,7,11,15-tetraenyl)-cyclohexanol | $C_{30}H_{52}O$ |
| 50. | 25.52 | 0.24 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 51. | 25.56 | 0.23 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 52. | 25.63 | 0.28 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 53. | 25.75 | 0.35 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| | | | Astaxanthin | $C_{40}H_{52}O_4$ |
| | | | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 54. | 25.84 | 0.60 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 55. | 25.90 | 0.38 | 7aH-Cyclopenta[a]cyclopropa[f]cycloundecene-2,4,7 ,7a,10,11-hexol, 1,1a,2,3,4,4a,5,6,7,10,11,11a-dodecahydro-1,1,3,6,9 -pentamethyl-, 2,4,7,10,11-pentaacetate | $C_{30}H_{44}O_{11}$ |
| 56. | 26.12 | 2.04 | 9-Octadecene, 1,1'-[1,2-ethanediylbis(oxy)]bis-, (Z,Z)- | $C_{38}H_{74}O_2$ |
| 57. | 26.28 | 0.52 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 58. | 26.51 | 0.46 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 59. | 26.56 | 0.89 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 60. | 26.69 | 0.42 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 61. | 26.80 | 1.09 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 62. | 26.86 | 0.60 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 63. | 26.92 | 0.32 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 64. | 26.99 | 0.31 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 65. | 27.04 | 0.31 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 66. | 27.11 | 0.42 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 67. | 27.16 | 0.35 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 68. | 27.46 | 0.81 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 69. | 27.61 | 0.59 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 70. | 28.19 | 1.05 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 71. | 28.33 | 0.37 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 72. | 28.50 | 0.58 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 73. | 28.66 | 0.77 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 74. | 28.72 | 0.64 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 75. | 29.05 | 0.49 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 76. | 29.19 | 0.46 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 77. | 29.42 | 4.25 | dl-à-Tocophero | $C_{29}H_{50}O_2$ |
| 78. | 29.61 | 0.49 | Glycine, N-[(3à,5á,7à,12à)-24-oxo-3,7,12-tris[(trimethylsilyl )oxy]cholan-24-yl]-, methyl ester | $C_{36}H_{69}NO6Si_3$ |

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|---|---|---|---|---|
| 79. | 29.75 | 0.48 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 80. | 29.80 | 0.41 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 81. | 29.89 | 0.40 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 82. | 30.00 | 0.77 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 83. | 30.06 | 0.50 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 84. | 30.15 | 0.54 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 85. | 30.20 | 0.27 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 86. | 30.57 | 0.64 | Cyclopropa[3',4']benz[1',2':4,5]azuleno[1,8a-d]-1,3dioxole-5b,7,7a-triol, 3a,5a,6,7,8,8a,8b,11-octahydro-10-(hydroxymethyl)2,2,4,6,8,8-hexamethyl-, 7,7a-diacetate, [3aS-(3aà,5aà,5bà,6à,7á,7aà,8aà,8bá,11aS*)]- | $C_{27}H_{38}O_8$ |
| 87. | 30.76 | 0.63 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 88. | 31.10 | 0.49 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 89. | 31.26 | 1.33 | Prosta-5,13-dien-1-oic acid, 9,11,15-tris[(trimethylsilyl)oxy]-, trimethylsilyl ester, (5Z,9à,11à,13E,15S)- | $C_{32}H_{66}O_5Si_4$ |
| 90. | 31.49 | 0.61 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 91. | 31.77 | 0.60 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 92. | 31.89 | 1.28 | Pregnane-3,20-dione, 11-[(trimethylsilyl)oxy]-, bis(O-methyloxime), (5á,11á)- | $C_{26}H_{46}N_2O_3Si$ |
| 93. | 32.09 | 0.67 | Glycine, N-[(3à,5á,12à)-3,12-dihydroxy-24-oxocholan-24-yl]- | $C_{26}H_{43}NO_5$ |
| 94. | 32.15 | 0.37 | 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- | $C_{27}H_{52}O_4Si_2$ |
| 95. | 32.20 | 0.40 | Colchicine, N-desacetyl-N-[4-hydroxy-3,5-dimethoxycinnamoyl]- | $C_{31}H_{33}NO_9$ |
| 96. | 32.40 | 0.39 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 97. | 32.48 | 0.69 | 2,4,6-Decatrienoic acid, 1a,2,5,5a,6,9,10,10a-octahydro-5,5a-dihydroxy-4-(h ydroxymethyl)-1,7,9-trimethyl-1-[[(2-methyl-1-oxo2-butenyl)oxy]methyl]-11-oxo-1H-2,8a-methanocyclopenta [a]cyclopropa [e] cyclodecen-6-yl ester | $C_{35}H_{46}O_8$ |
| 98. | 33.15 | 7.05 | ç-Sitosterol | $C_{29}H_{50}O$ |
| 99. | 33.52 | 0.41 | 1-Monolinoleoylglycerol trimethylsilyl ether | $C_{27}H_{54}O_4Si_2$ |
| 100 | 33.98 | 2.43 | à-Amyrin | $C_{30}H_{50}O$ |

To determine the possible chemical components from the leaves of *Ficus mollis* Vahl GC-MS. was conducted. The GC-MS profile showed the presence of hundred compounds in methanol leaves extract of *Ficus mollis* Vahl. The GC-MS chromatogram of the hundred peaks of the compounds detected was shown in Figure- 1. Gas-chromatogram showed the relative concentrations of various compounds getting eluted as a function of retention time. The peak area indicated the relative concentrations of the compounds present in the plant. The retention time of the compounds eluted at different times was to identify the nature and structure of the compounds present in the sample. The active compounds with their retention time (RT), peak area%, name of the compounds and molecular formula are given in Table- 2. GC-MS results of methanol leaves extract of *Ficus mollis*Vahl shows hundred compounds. Ten compounds are major while others are minors. The major compounds include Deoxyspergualin (7.79%), ç-Sitosterol (7.05%), Cyclopentasiloxane, decamethyl- (5.07%), dl-à-Tocophero (4.25%), 2,2,4-Trimethyl-3-(3,8,12,16-tetramethyl-heptadeca-3,7,11,15 tetraenyl)-cyclohexanol (2.75%), à-Amyrin (2.43%), 9,12,15-Octadecatrienoic acid, 2,3-bis[(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- (2.41%), Phytol (2.39%), 9,12,15-Octadecatrienoic acid, 2,3-bis [(trimethylsilyl)oxy]propyl ester, (Z,Z,Z)- (2.31%) and Cyclohexasiloxane, dodecamethyl- (2.12%) while others are minor constituents listed in the Table-2.

Deoxyspergualin is experimentally and clinically proven a novel immunosuppressant and antitumour compound.[20-22] Decamethylcyclopentasiloxane is a precursor in the production of siloxane polymers for industry and medicine and is a carrier ingredient in many toiletries and cosmetics.[23] The compound, 9,12,15-Octadecatrienoic acid, which is an omega 3 fatty acid, and is useful as an antiinflammatory, antidiabetic, treats eczema, hypocholesterolemic, nematicide, pesticide,

anticancer, anti-inflammatory, viral and bacterial diseases, antihistamic and antioxidant as reported by Rajagopal *et al.*,[24] and Hema *et al.*,[25] Phytol a diterpene alcohol, inhibits the inflammatory response by reducing cytokine production and oxidative stress.[27] Phytol reported as a promising drug and offers the potential of a new direction for chemotherapy of human schistosomiasis.[26] Most of these compounds reported to have various bioactivities including antimicrobial, anti-inflammatory, antioxidant, antiandrogenic, anticancer, antiacne, anti-ageing, antidiabetic, antidermatic and antimalerial.

## CONCLUSION

*Ficus mollis* Vahl. is an important medicinal plant belongs to family Moraceae. Phytochemical analysis of leaf extract in different solvents shows presence of different phytochemicals like carbohydrates, phenol, tannins proteins & amino acids , anthocyanin, saponin, flavonoid anthraquinones and cardiac glycosides. GC-MS profile of leaf extract in methanol include 100 compounds out of which 10 major are well known for antiinflammatory, antidiabetic, hypocholesterolemic, nematicide, pesticide, anticancer, anti-inflammatory, antiviral and antibacterial , antihistamic and antioxidant activities. However, isolation of individual phytochemical constituents may proceed to find a novel drug or a lead compound.

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