**Supplementary** **table 1*:*** Preliminary qualitative phytochemical analysis of *P. undulata* aerial portions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Phytocomponent** | **Water** | **Ethanol** | **Methanol** | **Ethyl acetate** | **Hexane** |
| **Quinones** | **+++** | **+++** | **+++** | + | + |
| **Anthroquinone** | **-** | **-** | **-** | **-** | **-** |
| **Tannins** | **+** | **+++** | **+++** | **-** | **-** |
| **Coumarins** | **++** | **+++** | **+++** | **-** | **-** |
| **Saponins** | **++** | **+** | **+** | **+** | **+** |
| **Glycosides** | **+** | **++** | **++** | **+** | **-** |
| **Flavonoids** | **+** | **+++** | **+++** | **-** | **-** |
| **Alkaloids** | **-** | **+++** | **+** | **+** | **+** |
| **Triterpenoids** | **+** | **++** | **++** | ++ | + |
| **Phenolic** | **+** | **++** | **+++** | **-** | **-** |

**Supplementary table 2**: Phytochemical constituents of P. undulata methanolic extract

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Peak**  **N.** | **R.T** | **Peak area (%)** | **Compound name** | **Formula** | **Biological activity** |
| 1 | 3.8363 | 1.4192 | Cyclotrisiloxane, hexamethyl- | C6H18O3Si3 | Antimicrobial |
| 2 | 5.6844 | 0.6625 | Cyclotetrasiloxane, octamethyl- | C8H24O4Si4 | Antimicrobial activity |
| 3 | 7.0205 | 0.1361 | Cyclopentasiloxane, decamethyl- | C10H30O5Si5 | Antimicrobial activity |
| 4 | 9.674 | 0.2852 | Dodecanoic acid, methyl ester | C13H26O2 | Antifungal |
| 5 | 10.8471 | 0.2645 | Methyl tetradecanoate | C15H30O2 | - |
| 6 | 11.0008 | 0.1709 | 6-Ethyl-3-methylthio-1,2,4-triazolo(3,4-b)-1,3,4-thiadiazole | C6H8N4S2 | -- |
| 7 | 11.7363 | 0.2777 | 4-Penten-1-ol, 5-phenyl-3-piperidino | C5H10O | -- |
| 8 | 11.8201 | 0.6165 | 2,3-Dihydro-6-isopropyl-1,2,4-triazolo(3,4-b)-1,3,4-thiadiazole-3-thione | C6H8N4S2 | -- |
| 9 | 11.9086 | 1.7516 | Hexadecanoic acid, methyl ester | C17H34O2 | Antioxidant, anti-inflammatory |
| 10 | 12.1739 | 1.0675 | 1,4-Benzenedicarbonitrile, 2,3,5,6-tetrafluoro- | C8F4N2 | -- |
| 11 | 12.2391 | 0.711 | n-Hexadecanoic acid, | C16H32O2 | Antioxidant, anti-inflammatory |
| 12 | 12.3135 | 0.8794 | 1,4-Benzenedicarbonitrile, 2,3,5,6-tetrafluoro- | C8F4N2 | -- |
| 13 | 12.4067 | 0.6481 | Tetracarbonyl-(diisopropylamino-ethoxycarben)-iron | C13H19FeNO5 | -- |
| 14 | 12.4625 | 0.7044 | 2,5-Cyclohexadiene-1,4-dione, 2-(2-hydroxyphenyl)- | C12H8O3 | -- |
| 15 | 12.5463 | 0.3664 | Valine, N-methyl-N-neopentyloxycarbonyl-, octadecyl ester | C30H59NO4 | -- |
| 17 | 12.6906 | 2.6803 | 4,6(1H,5H)-Pyrimidinedione, 1,3-diethyldihydro-2-thioxo- | C14H16N2O2S | -- |
| 18 | 12.7512 | 2.1766 | 9,12-Octadecadienoic acid (Z,Z)-, methyl ester | C18H32O2 | Anti-inflammatory, Hypocholesterolemic, Cancer preventive |
| 19 | 12.807 | 0.9128 | 6-Ethyl-3-methylthio-1,2,4-triazolo(3,4-b)-1,3,4-thiadiazole | C6H8N4S2 | -- |
| 20 | 12.8768 | 0.5506 | 2H-Benz[e]inden-3-ol, 3,3a,4,5-tetrahydro-3a-methyl-, (3S-cis)- | C14H16O | -- |
| 21 | 13.0072 | 4.8209 | 4,6(1H,5H)-Pyrimidinedione, 1,3-diethyldihydro-2-thioxo- | C14H16N2O2S | -- |
| 22 | 13.0631 | 1.2275 | Valine, N-methyl-N-neopentyloxycarbonyl-, octadecyl ester | C30H59NO4 | -- |
| 23 | 13.091 | 1.9638 | 4-Carbamoyl-2,2,5,5-tetramethyl-3-imidazoline-3-oxide-1-oxyl | C8H14N3O3 | -- |
| 24 | 13.1794 | 1.1137 | L-Norvaline, N-hexyloxycarbonyl-, tetradecyl ester | C26H51NO4 | -- |
| 25 | 13.2958 | 4.6553 | 4,6(1H,5H)-Pyrimidinedione, 1,3-diethyldihydro-2-thioxo- | C14H16N2O2S | -- |
| 28 | 13.5938 | 8.5569 | 9,12-Octadecadienoic acid (Z,Z)-Octadecenoic acid (Z) methyl ester | C19H34O2 | Antioxidant- anticancer |
| 29 | 13.9895 | 2.4805 | Tetracarbonyl-(diisopropylamino-ethoxycarben)-iron | C13H19FeNO5 | -- |
| 30 | 14.05 | 2.093 | 1,4-Benzenedicarbonitrile, 2,3,5,6-tetrafluoro- | C8F4N2 | -- |
| 31 | 14.171 | 2.6145 | L-Norvaline, N-hexyloxycarbonyl-, decyl ester | C22H43NO4 | -- |
| 32 | 14.3619 | 0.9701 | Tetracarbonyl-(diisopropylamino-ethoxycarben)-iron | C13H19FeNO5 | -- |
| 33 | 14.4131 | 0.8531 | 4-Penten-1-ol, 5-phenyl-3-piperidino | C5H10O | -- |
| 34 | 14.4597 | 1.6289 | Thiazolo[5,4-f]quinoline, 2-methyl- |  | -- |
| 35 | 14.5854 | 1.4541 | 4-Penten-1-ol, 5-phenyl-3-piperidino | C5H10O | -- |
| 36 | 14.6738 | 1.016 | Tetrafluorophthalonitrile | C8F4N2 | Fungicidal |
| 37 | 14.739 | 1.2294 | Tetracarbonyl-(diisopropylamino-ethoxycarben)-iron | C13H19FeNO5 | -- |
| 38 | 14.8321 | 1.723 | l-Norleucine, N-neopentyloxycarbonyl-, pentadecyl ester | C27H53NO4 | -- |
| 39 | 14.8833 | 1.554 | l-Norleucine, N-neopentyloxycarbonyl-, dodecyl ester | C24H47NO4 | -- |
| 40 | 14.9345 | 2.9097 | gamma-Sitosterol | C29H50O | Anticancer and antioxidant, cause decreases in serum cholesterol |
| 41 | 15.0183 | 1.8199 | Thiazolo[5,4-f]quinoline, 7-methyl- | C11H8N2S | Antimicrobial, antitumor |
| 42 | 15.1021 | 1.2829 | trans-4-Aminocyclohexanol, N,N',O-tris(trimethylsilyl) | C15H37NOSi3 | pharmaceutical compound |
| 43 | 15.6468 | 0.3374 | 4-Bromo-2-cyano-5-phenyl-penta-2,4-dienethioic acid amide | C12H9BrN2S | -- |
| 44 | 15.7352 | 0.4214 | Squalene | C30H50 | Anti-cancer, Anti-microbial, Antioxidant, Anti-tumor chemopreventive |
| 45 | 15.9447 | 0.1088 | 4-Bromo-2-cyano-5-phenyl-penta-2,4-dienethioic acid amide | C12H9BrN2S | -- |
| 46 | 16.6058 | 2.5982 | 4,4,6a,6b,8a,11,11,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,14,14a,14b-octadecahydro-2H-picen-3-one | C30H48O | Antioxidant |
| 47 | 17.2203 | 3.1137 | Nonacosane | C29H6O | medicinal importance as an anti-inflammatory, antibacterial, antiulcerogenic |