**GC-MS experiment**

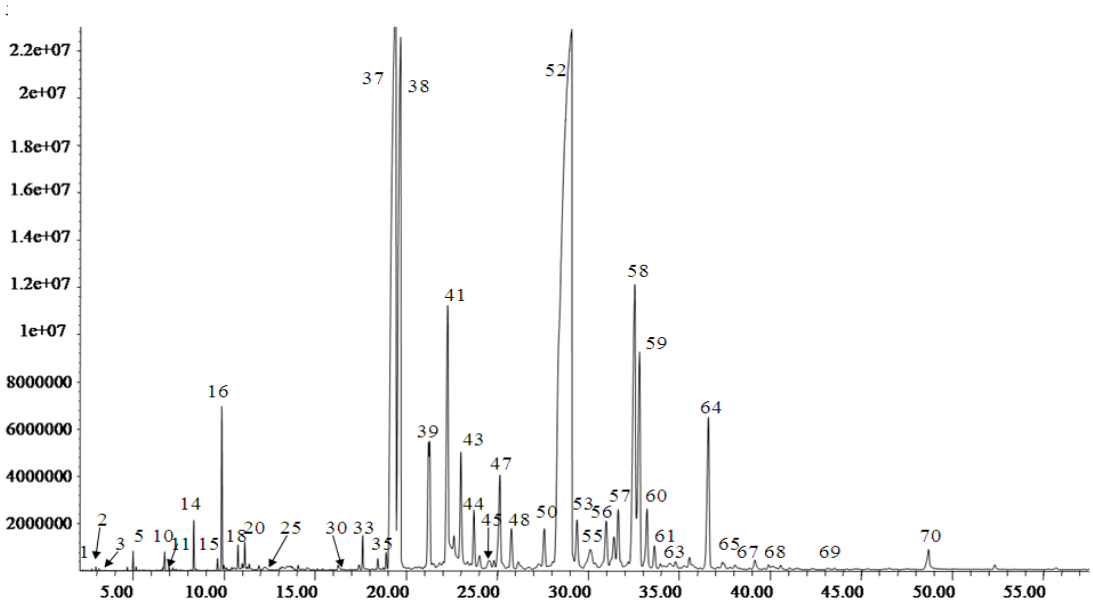


Figure S1 Total ion current map of volatile oil part of LTP

Table S1 Chemical components of volatile oil from LTP

| No. | *t*/min | Compound | *Content* (%) |
|---|---|---|---|
| 1 | 2.76 | Hexanal | 0.01 |
| 2 | 3.15 | Furfural | 0.01 |
| 3 | 4.51 | 1,7,7-Trimethyl-tricyclo[2.2.1.0(2,6)]heptane | 0.01 |
| 4 | 4.70 | α-Pinene | 0.01 |
| 5 | 5.01 | Camphene | 0.08 |
| 6 | 5.18 | Benzaldehyde | 0.02 |
| 7 | 5.42 | 4-Methylene-1-(1-methylethyl)-bicyclo[3.1.0]hexane | 0.01 |
| 8 | 5.56 | β-Pinene | 0.01 |
| 9 | 6.55 | 1-Methyl-3-(1-methylethyl)-benzene | 0.01 |
| 10 | 6.75 | Eucalyptol | 0.13 |
| 11 | 6.99 | Benzeneacetaldehyde | 0.02 |
| 12 | 7.20 | Dodecane | 0.04 |
| 13 | 7.36 | 1-Methyl-4-(1-methylethyl)-1,4-cyclohexadiene | 0.02 |
| 14 | 8.35 | 3,7-Dimethyl-1,6-octadien-3-ol | 0.28 |
| 15 | 9.65 | 6,6-Dimethyl-bicyclo[3.1.1]heptan-2-one | 0.07 |
| 16 | 9.88 | (1*R*)-1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2-one | 0.93 |
| 17 | 10.00 | 2,3,3-Trimethyl-bicyclo[2.2.1]heptan-2-ol | 0.03 |
| 18 | 10.77 | Terpinen-4-ol | 0.16 |
| 19 | 11.01 | Myrtanal | 0.07 |
| 20 | 11.14 | α-4-Trimethyl-3-cyclohexene-1-methanol | 0.18 |
| 21 | 11.29 | 2-Hydroxy-benzoic acid methyl ester | 0.03 |

| | | | |
|---|---|---|---|
| 22 | 11.39 | (1*R*)-(-)-Myrtenal | 0.09 |
| 23 | 11.92 | β-Methyl-cinnamaldehyde | 0.05 |
| 24 | 12.24 | (*R*)- 3,7-Dimethyl-6-octen-1-ol | 0.10 |
| 25 | 12.68 | 2-Methyl-3-phenyl-propanal | 0.01 |
| 26 | 13.49 | 6,6-Dimethyl-bicyclo[3.1.1]heptane-2-methanol | 0.08 |
| 27 | 14.08 | Acetic acid,1,7,7-trimethyl-bicyclo[2.2.1]hept-2-ylester | 0.05 |
| 28 | 14.30 | Tridecane | 0.03 |
| 29 | 14.59 | 4-(1-Methylethenyl)-1-cyclohexene-1-methanol | 0.06 |
| 30 | 16.27 | 2-Methoxy-3-(2-propenyl)-phenol | 0.07 |
| 31 | 16.99 | α-Cubebene | 0.03 |
| 32 | 17.43 | [1*S*-(1α,2β,4β)]-1-Ethenyl-1-methyl-2,4-*bis*(1-methylethenyl)-cyclohexane | 0.06 |
| 33 | 17.62 | 1,2-Dimethoxy-4-(2-propenyl)-benzene | 0.24 |
| 34 | 18.15 | β-Selinene | 0.03 |
| 35 | 18.45 | Aristolene | 0.12 |
| 36 | 18.91 | [1a*R*-(1aα,7α,7aα,7bα)]-1a,2,3,5,6,7,7a,7b-Octahydro -1,1,7,7a-tetramethyl-1*H*-cyclopropa[a]naphthalene | 0.13 |
| 37 | 19.41 | Paeonol | 15.76 |
| 38 | 19.68 | 1,2-Dimethoxy-4-(1-propenyl)-benzene | 9.47 |
| 39 | 21.80 | 1-(2,6,6-Trimethyl-1-cyclohexen-1-yl)-1-penten-3-one | 0.08 |
| 40 | 22.01 | Butylated hydroxytoluene | 0.06 |
| 41 | 22.26 | Shyobunone | 4.04 |
| 42 | 22.60 | (1*S*-*cis*)-1,2,3,5,6,8a-Hexahydro-4,7-dimethyl-1-(1-methylethyl)-naphthalene | 0.75 |
| 43 | 22.98 | Octahydro-4,4,8,8-tetramethyl-4a,7-methano-4a*H*-naphth[1,8a-b]oxirene | 1.62 |
| 44 | 24.00 | 1,2,3-Trimethoxy-5-(2-propenyl)-benzene | 0.28 |
| 45 | 24.52 | 7-(1-Methylethylidene)-bicyclo[4.1.0]heptane | 0.29 |
| 46 | 24.80 | 1,2-Dihydro-1,1,6-trimethyl-naphthalene | 0.14 |
| 47 | 25.11 | 1,2-Dimethoxy-4-(2-methoxy-1-propenyl)benzene | 1.49 |
| 48 | 25.75 | [1aγ-(1aα,4aα,7β,7aβ,7bα)]-Decahydro-1,1,7-trimethyl-4-methylene-, 1*H*-cycloprop[e]azulen-7-ol | 0.60 |
| 49 | 26.13 | Isoaromadendrene epoxide | 0.23 |
| 50 | 27.56 | Dehydroxy-isocalamendiol | 0.63 |
| 51 | 28.04 | [1a*R*-(1aα,4α,4aβ,7bα)]-1a,2,3,4,4a,5,6,7b-Octahydro -1,1,4,7-tetramethyl-1*H*-cycloprop[e]azulene | 0.22 |
| 52 | 29.06 | β-Asarone | 36.88 |
| 53 | 29.36 | Dehydroxy-isocalamendiol | 0.84 |

| | | | |
|---|---|---|---|
| 54 | 30.09 | 2-Isopropyl-5-methyl-9-methylene-bicyclo[4.4.0]dec -1-ene | 0.73 |
| 55 | 30.35 | Copaene | 0.15 |
| 56 | 30.96 | α-Cadinol | 0.96 |
| 57 | 32.17 | 1,6-Dimethyl-4-(1-methylethyl)-naphthalene | 0.19 |
| 58 | 32.54 | α-Asarone | 5.41 |
| 59 | 32.79 | Zierone | 3.37 |
| 60 | 33.20 | 1,7-Dimethyl-4-(1-methylethyl)-spiro[4.5]dec-6-en-8-one | 0.99 |
| 61 | 33.61 | 3,5,6,7,8,8a-Hexahydro-4,8a-dimethyl-6-(1-methylethenyl)-2(1*H*)naphthalenone | 0.36 |
| 62 | 33.94 | 1,2,3,4-Tetrahydro-3-isopropyl-5-methyl-1-oxonaphthalene | 0.06 |
| 63 | 34.77 | 2,4,5-Trimethoxy-benzaldehyde | 0.17 |
| 64 | 36.57 | 4-Acetyl-7,7-dimethyl-2-(2-oxopropyl)-cycloheptanone | 2.46 |
| 65 | 37.35 | Tetradecanoic acid | 0.21 |
| 66 | 38.04 | 6-Isopropenyl-4,8a-dimethyl-1,2,3,5,6,7,8,8a-octahydronaphthalene-2,3-diol | 0.16 |
| 67 | 39.13 | 6-(1-Hydroxymethylvinyl)-4,8a-dimethyl-3,5,6,7,8,8a-hexahydro-1*H*-naphthalen-2-one | 0.21 |
| 68 | 39.89 | α-Isobutyl-2,4,5-trimethyl-benzyl alcohol | 0.08 |
| 69 | 43.12 | Pentadecanoic acid | 0.04 |
| 70 | 48.67 | *n*-Hexadecanoic acid | 0.39 |

HPLC-MS experiment

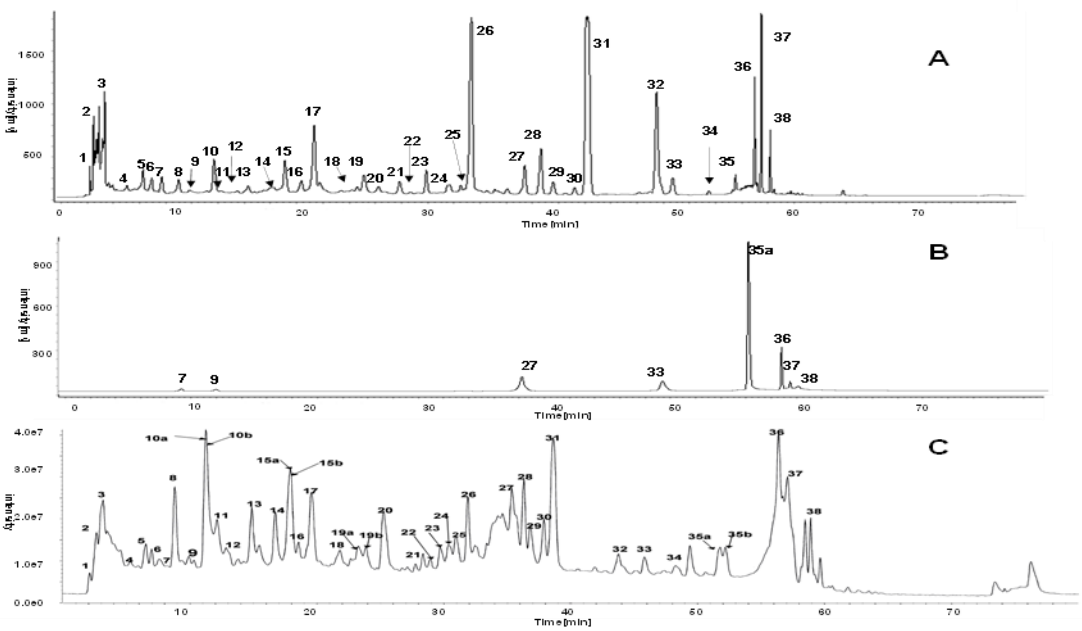


**Figure S2** HPLC chromatogram of *n*-butanol extract from LTP (A) and standards

solution (B) and TIC of *n*-butanol extract from LTP (C)

**Table S2** Results of the constituents of MS-ESI

| No. | *t*/min | MS | MS/MS | MW | Compound |
|---|---|---|---|---|---|
| 1 | 2.69 | 169 | 125,97,81 | 170 | Gallic acid |
| 2 | 3.18 | 463 | 433,403,343,301,241,169,125 | 464 | Mudanoside B |
| 3 | 4.07 | 361 | 361,343,199 | 362 | Catalpol |
| 4 | 4.49 | 407 | 347,329,185,167,147,127,59 | 348 | Leonuride |
| 5 | 6.53 | 495 | 465,281,165,137 | 496 | Oxypaeoniflorin |
| 6 | 6.86 | 183 | 124,95,78 | 184 | Methyl gallate |
| 7 | 7.98 | 539 | 449,435,357,283,195,121 | 480 | Albiflorin |
| 8 | 9.12 | 525 | 495,345,329,311,177,165,123 | 526 | Mudanpioside E |
| 9 | 10.53 | 539 | 449,327,165,121 | 480 | Paeoniflorin |
| 10a | 11.29 | 647 | 509,399,313,271,211 | 648 | Galloyl-oxypaeoniflorin |
| 10b | 11.53 | 635 | 483,465,313,295,271,169,125 | 636 | Trigalloyl glucose |
| 11 | 12.16 | 787 | 635,617,483,465,277,169,125 | 788 | Tetragalloyl glucose |
| 12 | 12.81 | 611 | 445,343,301,283,169,151,125 | 612 | Suffruiticoside AorC |
| 13 | 15.54 | 611 | 445,343,313,283,169,151,125 | 612 | Suffruiticoside BorD |
| 14 | 16.77 | 631 | 613,491,399,313,271,169,125 | 632 | Galloyl-paeoniflorin |
| 15a | 17.01 | 335 | 183,169,124,95 | 336 | Galloyl methyl gallate |
| 15b | 17.87 | 939 | 769,393,169,317,617 | 940 | Pentagalloyl glucose |
| 16 | 18.56 | 623 | 461,315,179,161,133 | 624 | Resveratrol galloyl glucoside |
| 17 | 19.44 | 479 | 433,357,327,283,195,121 | 480 | Mudanpioside I |
| 18 | 22.62 | 615 | 615,585,477,281,239 | 616 | iso-Mudanpioside H |
| 19a | 23.22 | 541 | 313,227,169,125 | 542 | Resveratrol galloyl glucoside |
| 19b | 23.95 | 1091 | 939,769,617,447,169 | 1092 | Hexagalloyl glucose |
| 20 | 25.09 | 571 | 571,313,257,241,169 | 572 | Unidentied |
| 21 | 29.61 | 599 | 551,447,477 | 600 | Benzoyloxypaeoniflorin |
| 22 | 29.82 | 629 | 599,507,167,121 | 630 | Mudanpioside J |
| 23 | 30.16 | 461 | 461,313,169,125 | 462 | Cinnyl galloyl glucoside |
| 24 | 30.28 | 165 | 150,135,122,91,65 | 166 | Paeonol |
| 25 | 30.97 | 599 | 569,477,403,447,333 | 600 | Mudanpioside C |
| 26 | 31.92 | 431 | 269,241,240,225 | 432 | Aloeemodin-glucoside |
| 27 | 35.31 | 643 | 553,535,431,265,165,121 | 584 | Benzoylpaeoniflorin |
| 28 | 35.96 | 415 | 277,253,225 | 416 | Chrysophanol-glucoside |
| 29 | 36.88 | 991 | 931,799,637,475 | 932 | Notoginsenoside- $R_1$ |
| 30 | 37.91 | 431 | 269,241,225 | 432 | Emodin glucoside |
| 31 | 38.65 | 859 | 799,637,475 | 800 | Ginsenoside- $Rg_1$ |
| 32 | 43.49 | 607 | 443,295,169,125 | 608 | 4-Hydroxyphenyl-2-butanone cinnamic acid, galloyl glucoside |
| 33 | 45.81 | 269 | 240,223 | 270 | Aloeemodin |

| | | | | | |
|---|---|---|---|---|---|
| 34 | 48.41 | 859 | 859,619 | 800 | Ginsenoside-Rf |
| 35a | 51.58 | 283 | 257,239,211,183 | 284 | Rhein |
| 35b | 52.19 | 697 | 637,475 | 638 | Ginsenoside- $Rh_1$ |
| 36 | 56.78 | 269 | 241,225 | 270 | Emodin |
| 37 | 57.46 | 253 | 239,225 | 254 | Chrysophanol |
| 38 | 59.64 | 283 | 225,183 | 284 | Physcion |