

## Supplementary Data

This supplementary data is a part of a paper entitled “Volatile Profiling of Indonesian Culinary Mushrooms Using SPME Coupled to GC-MS and Chemometrics”.

**Table S1.** List of volatile organic compounds composition from thirteen Indonesia culinary mushroom with LRI value

| Compounds                     | LRI <sup>a</sup> | Odor description     | Relative peak area (%) ± SD <sup>b</sup> |           |            |            |            | FAT       | TRF         |
|-------------------------------|------------------|----------------------|--|-----------|------------|------------|------------|-----------|-------------|
|                               |                  |                      | AUJ <sup>c</sup>                         | AGB       | AUC        | AUM        | AUP        |           |             |
| <b>Acid</b>                   |                  |                      |  |           |            |            |            |           |             |
| Acetic acid                   | nd               | sour                 |  |           |            | 6.55±1.75  | 28.24±7.25 |           | 45.57±2.03  |
| 3-Methyl-4-oxo-pentanoic acid | nd               | nd                   |  |           |            |            | 0.19±0.06  |           |             |
| Butanoic acid, 3-methyl-      | 851.99           | sweaty               |  |           |            |            |            |           |             |
| <b>Aldehyde</b>               |                  |                      |  |           |            |            |            |           |             |
| Benzaldehyde                  | 944.35           | almond               | 2.33±0.37                                | 6.30±0.79 | 1.32±0.11  | 8.59±0.36  | 0.50±0.06  |           | 3.01±0.39   |
| Benzaldehyde, 3-methyl-       | 1085.4           | nd                   |  |           | 2.59±1.59  |            |            |           | 0.90±0.46   |
| Butanal, 2-methyl-            | nd               | black truffle        |  | 0.35±0.22 |            |            |            |           |             |
| Butanal, 3-methyl-            | nd               | fatty, malty         | 0.11±0.04                                | 0.18±0.05 | 0.43±0.17  | 0.14±0.10  |            |           |             |
| Decanal                       | 1208.2           | soap, orange         |  |           |            | 1.39±0.42  | 0.60±0.3   |           |             |
| Furfural                      | nd               | Almond, burnt        |  |           |            |            |            |           | 1.94±0.3    |
| Heptanal                      | 860.4            | fat, citrus          |  |           |            | 0.53±0.04  |            |           |             |
| Hexanal                       | nd               | grass, fat           | 0.93±0.23                                | 0.22±0.03 | 1.13±0.17  | 2.59±0.15  | 0.14±0.01  | 0.36±0.13 | 0.52±0.17   |
| Nonanal                       | 1106             | fat, citrus, green   | 6.02±1.41                                |           | 9.743±1.8  | 6.41±0.92  | 1.88±0.25  |           |             |
| Octanal                       | 1004.1           | fat, lemon, green    | 0.42±0.06                                |           | 1.28±0.28  | 1.73±0.3   | 0.30±0.06  |           |             |
| Pentanal                      | nd               | almond, malt         |  |           |            | 0.65±0.02  |            |           |             |
| Pentanal, 2-methyl-           | nd               | nd                   |  |           |            |            |            | 0.54±0.29 |             |
| <b>Alcohol</b>                |                  |                      |  |           |            |            |            |           |             |
| 1-Butanol                     | nd               | fruit                | 1.21±0.39                                |           | 1.65±0.07  |            |            | 0.75±0.21 |             |
| 1-Butanol, 2-methyl-          | nd               | onion                |  |           |            |            |            |           |             |
| 1-Butanol, 2-methyl-, acetate | 832.42           | nd                   |  |           |            |            | 0.28±0.06  |           |             |
| 1-Butanol, 2,3-dimethyl-      | nd               | nd                   |  |           |            |            |            | 0.45±0.07 |             |
| 1-Butanol, 3-methyl-          | nd               | nd                   | 0.34±0.17                                | 0.60±0.15 | 0.51±0.04  |            | 0.62±0.13  | 0.25±0.09 |             |
| 1-Butanol, 3-methyl-, acetate | 829.43           | nd                   |  |           |            |            | 0.77±0.13  |           |             |
| 1-Decanol, 2-hexyl-           | 1361.4           | nd                   |  |           |            |            |            |           |             |
| 1-Hexanol                     | 822.34           | resin, flower, green |  |           |            |            | 0.32±0.01  | 3.27±0.3  |             |
| 2-Ethyl-1-hexanol             | 1031.7           | fresh, citrus        | 6.45±0.87                                | 3.21±0.26 | 8.07±1.48  | 11.3 ±0.68 | 5.82±0.86  | 4.38±0.51 |             |
| 1-Octen-3-ol                  | 973.8            | mushroom             | 1.01±0.42                                |           |            | 0.86±0.46  |            | 3.19±1.19 | 0.62±0.22   |
| 1-Pentanol                    | nd               | fruit                |  |           |            | 0.31±0.22  |            | 0.74±0.49 |             |
| 1,4-Benzenediol, 2-methyl-    | 1021.5           | nd                   |  |           |            |            |            |           |             |
| 2-Pentanol, 4-methyl-         | nd               | nd                   |  |           |            |            |            |           |             |
| 3-Octanol                     | 997.59           | mushroom             |  |           |            |            |            |           |             |
| cis-Chrysanthemyl alcohol     | 1483             | nd                   |  |           |            |            |            |           |             |
| Cyclohexanol, 2-methyl        | 908.51           | nd                   |  |           |            |            |            |           |             |
| Cyclohexanol, 2-methyl-       | 916.93           | nd                   |  |           |            |            | 0.20±0.13  |           |             |
| Ethanol                       | nd               | pungent              | 0.20±0.03                                |           | 0.12±0.08  | 0.93±0.03  | 0.05±0.01  |           | 0.016±0.003 |
| Ethanol, 2-methoxy-, acetate  | nd               | nd                   |  |           |            |            |            |           |             |
| Linalool                      | 1101.5           | flower               |  |           |            | 0.33±0.08  |            |           |             |
| Linalool, formate             | 1102.1           | nd                   |  |           |            |            | 0.49±0.08  |           |             |
| Menthol                       | 1175.1           | peppermint           |  |           |            |            | 0.34±0.05  |           |             |
| <b>Esther</b>                 |                  |                      |  |           |            |            |            |           |             |
| 2-Propenoic acid, butyl ester | 854.89           | nd                   |  | 0.26±0.18 | 1.38±0.008 | 0.48±0.28  | 0.14±0.03  |           | 0.21±0.06   |

| Compounds                                     | LRI <sup>a</sup> | Odor description | Relative peak area (%) $\pm$ SD <sup>b</sup> |                  |                 |                 |                  |                 |                 |
|---|------------------|------------------|--|------------------|-----------------|-----------------|------------------|-----------------|-----------------|
|   |                  |                  | AUJ <sup>c</sup>                             | AGB              | AUC             | AUM             | AUP              | FAT             | TRF             |
| 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate | 1601             | nd               |  |                  |                 |                 | 0.34 $\pm$ 0.15  | 0.62 $\pm$ 0.15 | 0.07 $\pm$ 0.06 |
| Acetic acid, 2-ethylhexyl ester               | 1153             | nd               |  |                  |                 |                 | 0.42 $\pm$ 0.04  |                 |                 |
| Acetic acid, butyl ester                      | nd               | nd               |  |                  |                 |                 | 0.25 $\pm$ 0.02  |                 |                 |
| Acetic acid, methyl ester                     | nd               | acid             |  |                  |                 | 0.19 $\pm$ 0.05 | 1.04 $\pm$ 0.04  |                 |                 |
| Formic acid, 2-ethylhexyl ester               | 1082             | nd               | 0.27 $\pm$ 0.12                              | 0.37 $\pm$ 0.32  | 0.21 $\pm$ 0.05 |                 |                  |                 |                 |
| Hexanoic acid, methyl ester                   | 892.61           | nd               |  |                  |                 | 1.11 $\pm$ 0.08 | 0.45 $\pm$ 0.23  |                 |                 |
| Isobutyl acetate                              | nd               | fruit, apple     |  |                  |                 |                 |                  |                 |                 |
| Methyl isovalerate                            | nd               | nd               | 0.09 $\pm$ 0.05                              | 0.13 $\pm$ 0.07  |                 |                 |                  |                 |                 |
| Nonanoic acid, methyl ester                   | 1227             | nd               |  | 0.23 $\pm$ 0.12  |                 | 0.41 $\pm$ 0.06 | 0.27 $\pm$ 0.01  |                 |                 |
| Propanoic acid, 2-methyl-, butyl ester        | 996.66           | nd               | 0.16 $\pm$ 0.09                              |                  | 1.16 $\pm$ 0.15 | 0.25 $\pm$ 0.13 |                  |                 |                 |
| <b>Ether</b>                                  |                  |                  |  |                  |                 |                 |                  |                 |                 |
| Eicosyl isopropyl ether                       | 1498             | nd               |  |                  |                 |                 |                  |                 |                 |
| <i>n</i> -Butyl ether                         | 835              | nd               | 0.37 $\pm$ 0.12                              | 0.31 $\pm$ 0.02  | 0.42 $\pm$ 0.11 |                 |                  | 0.68 $\pm$ 0.03 | 0.05 $\pm$ 0.03 |
| <b>Heterocyclic</b>                           |                  |                  |  |                  |                 |                 |                  |                 |                 |
| 2-Furancarboxaldehyde, 5-methyl-              | 932              | nd               |  |                  |                 |                 |                  |                 |                 |
| 2,4-Dimethylfuran                             | nd               | nd               |  |                  |                 |                 |                  |                 |                 |
| 2(3 <i>H</i> )-Furanone, dihydro-5-methyl-    | 944              | nd               |  | 0.92 $\pm$ 0.07  |                 |                 |                  |                 |                 |
| Furan, 2-pentyl-                              | 988              | nd               |  |                  | 2.23 $\pm$ 1.15 | 2.82 $\pm$ 0.39 |                  | 0.80 $\pm$ 0.69 | 0.67 $\pm$ 0.18 |
| Piperazine, 2-methyl-                         | nd               | nd               |  |                  |                 |                 |                  | 0.47 $\pm$ 0.28 |                 |
| Pyrazine, 2,5-dimethyl-                       | 876              | nd               |  | 0.02 $\pm$ 0.01  |                 |                 |                  |                 |                 |
| Pyrazine, 2,6-dimethyl-                       | 877              | nd               |  |                  |                 |                 |                  |                 |                 |
| <b>Hydrocarbon</b>                            |                  |                  |  |                  |                 |                 |                  |                 |                 |
| 1-Tridecene                                   | 1290             | nd               |  | 0.27 $\pm$ 0.16  |                 |                 |                  | 7.2 $\pm$ 0.46  |                 |
| 1-Undecene                                    | 1090             | nd               |  | 8.62 $\pm$ 2.9   |                 |                 | 0.29 $\pm$ 0.12  |                 |                 |
| 1-Octene                                      | nd               | nd               | 0.35 $\pm$ 0.08                              |                  |                 |                 |                  |                 |                 |
| 1,3,5,7-Cyclooctatetraene                     | 846              | nd               |  |                  |                 |                 | 0.78 $\pm$ 0.43  |                 |                 |
| 2,4-Dimethyl-1-heptene                        | nd               | nd               |  |                  |                 |                 |                  |                 |                 |
| Cyclohexane, 1-methylene-4-(1-methylethenyl)- | 1027             | nd               | 6.7 $\pm$ 1.4                                |                  |                 |                 |                  |                 | 0.50 $\pm$ 0.06 |
| Cyclopentane, decyl-                          | 1653             | nd               |  |                  |                 | 0.15 $\pm$ 0.02 |                  |                 |                 |
| Decane  | 1115             | alkane           |  |                  |                 |                 |                  | 0.36 $\pm$ 0.09 |                 |
| Decane, 3,7-dimethyl-                         | 1100             | nd               | 1.10 $\pm$ 0.86                              |                  | 1.06 $\pm$ 0.41 |                 | 0.70 $\pm$ 0.10  |                 | 1.57 $\pm$ 0.21 |
| Decane, 5,6-dimethyl-                         | 1087             | nd               |  |                  |                 |                 |                  |                 |                 |
| Dodecane                                      | 1198             | alkane           |  | 0.12 $\pm$ 0.007 | 1.84 $\pm$ 0.15 |                 |                  | 0.31 $\pm$ 0.22 | 0.81 $\pm$ 0.18 |
| Dodecane, 2,6,10-trimethyl-                   | 1106             | nd               | 0.89 $\pm$ 0.78                              | 1.37 $\pm$ 0.13  |                 |                 | 0.49 $\pm$ 0.08  |                 |                 |
| Dodecane, 2,6,11-trimethyl-                   | 1278             | nd               | 1.17 $\pm$ 0.49                              | 1.56 $\pm$ 0.39  | 1.83 $\pm$ 0.15 | 0.41 $\pm$ 0.22 | 1.43 $\pm$ 0.05  | 3.94 $\pm$ 0.18 | 1.27 $\pm$ 0.11 |
| Dodecane, 4-methyl-                           | 1323             | nd               |  | 0.44 $\pm$ 0.10  | 0.43 $\pm$ 0.20 |                 | 0.26 $\pm$ 0.015 | 0.78 $\pm$ 0.05 | 0.18 $\pm$ 0.03 |
| Dodecane, 4,6-dimethyl-                       | 1323             | nd               |  |                  |                 |                 |                  |                 |                 |
| Eicosane                                      | 1544             | alkane           |  | 0.55 $\pm$ 0.22  | 0.26 $\pm$ 0.13 | 0.09 $\pm$ 0.05 |                  |                 |                 |
| Heneicosane                                   | 1494             | alkane           |  |                  |                 |                 | 0.676146         | 1.22981         |                 |
| Heptadecane                                   | 1494             | alkane           |  |                  |                 | 0.39 $\pm$ 0.16 | 0.42 $\pm$ 0.18  | 0.14 $\pm$ 0.07 |                 |
| Heptane                                       | nd               | alkane           | 0.04 $\pm$ 0.06                              |                  |                 |                 |                  |                 |                 |
| Heptane, 2,2,4,6,6-pentamethyl-               | 980              | nd               |  |                  | 0.65 $\pm$ 0.44 |                 |                  |                 |                 |
| Heptane, 2,3-dimethyl-                        | nd               | nd               |  |                  |                 |                 |                  |                 |                 |
| Heptane, 2,4-dimethyl-                        | nd               | nd               | 0.05 $\pm$ 0.04                              | 0.19 $\pm$ 0.12  |                 | 0.2 $\pm$ 0.05  |                  |                 | 0.10 $\pm$ 0.05 |
| Hexadecane                                    | 1323             | alkane           |  | 0.15 $\pm$ 0.14  |                 |                 |                  |                 |                 |
| Hexane, 2,3,4-trimethyl-                      | nd               | nd               |  |                  |                 |                 |                  |                 | 0.20 $\pm$ 0.04 |
| <i>n</i> -hexane                              | nd               | alkane           | 0.12 $\pm$ 0.03                              | 0.15 $\pm$ 0.02  |                 |                 |                  |                 |                 |

| Compounds                                  | LRI <sup>a</sup> | Odor description | Relative peak area (%) $\pm$ SD <sup>b</sup> |                   |                 |                  |                  |                 |                  |  |
|--|------------------|------------------|--|-------------------|-----------------|------------------|------------------|-----------------|------------------|--|
|  |                  |                  | AUJ <sup>c</sup>                             | AGB               | AUC             | AUM              | AUP              | FAT             | TRF              |  |
| Nonadecane                                 | 1291             | alkane           |  | 0.41 $\pm$ 0.14   |                 |                  |                  |                 |                  |  |
| Nonane                                     | 854              | alkane           |  |                   |                 |                  |                  |                 |                  |  |
| Nonane, 3-methylene-                       | 971              | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Nonane, 4,5-dimethyl-                      | 1106             | nd               |  |                   | 0.71 $\pm$ 0.36 |                  |                  | 1.60 $\pm$ 0.92 |                  |  |
| Nonane, 5-butyl-                           | 1099             | nd               | 0.3 $\pm$ 0.12                               |                   |                 |                  |                  |                 |                  |  |
| Octane, 2,3,6,7-tetramethyl-               | 1092             | nd               | 0.33 $\pm$ 0.17                              |                   | 0.3 $\pm$ 0.19  |                  | 0.08 $\pm$ 0.06  |                 |                  |  |
| Octane, 3,3-dimethyl-                      | 1007             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Octane, 6-ethyl-2-methyl-                  | 1100             | nd               |  | 1.61 $\pm$ 0.19   |                 |                  |                  | 3.21 $\pm$ 0.07 | 0.29 $\pm$ 0.18  |  |
| Pentane, 3-methyl-                         | nd               | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Propane, 1-(ethenyloxy)-2-methyl-          | nd               | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Tetradecane                                | 1398             | alkane           |  | 0.07 $\pm$ 0.03   |                 | 0.98 $\pm$ 0.082 | 0.14 $\pm$ 0.07  | 0.16 $\pm$ 0.08 |                  |  |
| Tetradecane, 1-chloro-                     | 1419             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Tetradecane, 4-methyl-                     | 1316             | nd               |  |                   |                 |                  |                  |                 | 0.20 $\pm$ 0.1   |  |
| Trichloromethane                           | nd               | nd               |  | 0.071 $\pm$ 0.009 |                 |                  |                  |                 |                  |  |
| Undecane, 2,3-dimethyl-                    | 1169             | nd               |  |                   | 0.43 $\pm$ 0.30 |                  |                  |                 |                  |  |
| Undecane, 2,4-dimethyl-                    | 1262             | nd               |  |                   |                 |                  |                  |                 | 0.066 $\pm$ 0.03 |  |
| Undecane, 4-methyl-                        | 1114             | nd               | 0.20 $\pm$ 0.13                              | 0.31 $\pm$ 0.06   |                 |                  |                  | 0.39 $\pm$ 0.24 | 0.41 $\pm$ 0.05  |  |
| Undecane, 4,6-dimethyl-                    | 1212             | nd               |  |                   |                 |                  | 0.13 $\pm$ 0.006 |                 |                  |  |
| Undecane, 4,8-dimethyl-                    | 1340             | nd               |  |                   | 0.32 $\pm$ 0.19 |                  |                  |                 |                  |  |
| Azulene                                    | 1185             | nd               | 1.08 $\pm$ 0.04                              | 1.55 $\pm$ 0.26   | 2.04 $\pm$ 0.14 |                  |                  |                 | 0.57 $\pm$ 0.18  |  |
| Benzene, 1-ethyl-3-methyl-                 | 1021             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Benzene, 1,2,3-trimethyl-                  | 989              | nd               |  | 0.096 $\pm$ 0.07  |                 |                  |                  |                 |                  |  |
| Benzene, 1,2,4-trimethyl-                  | 953              | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Benzene, 1,2,4,5-tetramethyl-              | 1120             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Benzene, 1,3-dichloro-                     | 1012             | nd               | 0.38 $\pm$ 0.10                              | 0.47 $\pm$ 0.17   | 2.68 $\pm$ 0.52 | 0.27 $\pm$ 0.13  | 0.92 $\pm$ 0.1   | 1.2 $\pm$ 0.13  |                  |  |
| Benzene, 1-ethenyl-3-ethyl-                | 1150             | nd               |  | 0.0653            |                 |                  |                  |                 |                  |  |
| Benzene, <i>tert</i> -butyl-               | 1086             | nd               |  |                   |                 |                  |                  |                 | 0.17 $\pm$ 0.03  |  |
| Cyclohexene, 1-methyl-5-(1-methylethenyl)- | 1027             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Ethylbenzene                               | nd               | nd               |  |                   |                 |                  | 0.13 $\pm$ 0.007 |                 |                  |  |
| <i>o</i> -Cymene                           | 1024             | citrus           |  | 1.3 $\pm$ 1.2     |                 |                  |                  |                 |                  |  |
| <i>o</i> -Xylene                           | 819              | geranium         | 0.42 $\pm$ 0.07                              |                   | 0.33 $\pm$ 0.08 | 0.13 $\pm$ 0.07  | 0.31 $\pm$ 0.01  | 0.43 $\pm$ 0.03 | 0.08 $\pm$ 0.01  |  |
| <i>p</i> -Cymene                           | 1024             | citrus           | 0.9 $\pm$ 0.3                                |                   |                 | 0.20 $\pm$ 0.12  | 2.05 $\pm$ 0.41  | 0.22 $\pm$ 0.02 |                  |  |
| <b>Ketone</b>                              |                  |                  |  |                   |                 |                  |                  |                 |                  |  |
| 2-Cyclopenten-1-one, 2,3-dimethyl-         | 817              | nd               |  |                   |                 |                  |                  |                 |                  |  |
| 2-Decanone                                 | 1196             | nd               |  | 0.15 $\pm$ 0.01   |                 | 0.76 $\pm$ 0.23  |                  |                 |                  |  |
| 2-Nonanone                                 | 1095             | alkane           |  |                   |                 | 0.10 $\pm$ 0.015 |                  |                 |                  |  |
| 3-Ethylcyclopentanone                      | 939              | nd               |  |                   |                 | 0.33 $\pm$ 0.04  |                  |                 |                  |  |
| 3-Hexanone, 4-methyl-                      | nd               | nd               |  |                   |                 |                  |                  |                 |                  |  |
| 3-Octanone                                 | 983              | fruity, sweet    | 0.31 $\pm$ 0.08                              |                   |                 |                  | 0.07 $\pm$ 0.015 | 0.25 $\pm$ 0.05 |                  |  |
| 5-Hepten-2-one, 6-methyl-                  | 985              | nd               |  |                   | 0.42085         |                  |                  |                 | 0.34001          |  |
| 2-undecanone                               | 1295             | fruit            |  |                   |                 | 1.84             |                  |                 | 5.78             |  |
| 6-Undecanone                               | 1274             | fruit            |  |                   |                 | 0.070271         |                  |                 |                  |  |
| Butyrolactone                              | 889              | nd               |  |                   |                 |                  |                  |                 |                  |  |
| Ethanone, 1-(3-methylphenyl)-              | 1086             | nd               |  |                   |                 |                  |                  |                 |                  |  |
| <b>Sulfur</b>                              |                  |                  |  |                   |                 |                  |                  |                 |                  |  |
| Dimethyl trisulfide                        | 954              | sulfur           |  |                   |                 |                  |                  |                 |                  |  |
| Dimethyl disulfide                         | nd               | nd               |  |                   |                 |                  |                  |                 |                  |  |
| <b>Terpenoid</b>                           |                  |                  |  |                   |                 |                  |                  |                 |                  |  |
| $\alpha$ -Phellandrene                     | 1002             | dill             | 0.48 $\pm$ 0.36                              | 1.70 $\pm$ 0.34   |                 |                  | 0.35 $\pm$ 0.03  |                 | 0.07 $\pm$ 0.01  |  |

| Compounds          | LRI <sup>a</sup> | Odor description | Relative peak area (%) ± SD <sup>b</sup> |            |           |           |           |            |             |
|--------------------|------------------|------------------|--|------------|-----------|-----------|-----------|------------|-------------|
|                    |                  |                  | AUJ <sup>c</sup>                         | AGB        | AUC       | AUM       | AUP       | FAT        | TRF         |
| α-Pinene           | 900              | pine, turpentine | 0.62±0.15                                | 1.32±0.38  |           | 0.90±0.17 | 0.35±0.16 | 0.14±0.09  | 0.17±0.044  |
| β-Bisabolene       | 1513             | balsamic         |  |            |           |           |           |            |             |
| β-Guaiene          | 1309             | wood, balsamic   | 0.45±0.12                                |            |           |           |           |            |             |
| β-Longipinene      | 1400             | pine, turpentine |  |            |           |           |           |            |             |
| β-Myrcene          | 986              | balsamic, must   | 2.53±0.36                                | 3.68±0.28  |           |           | 1.23±0.06 |            |             |
| β-Pinene           | 962              | pine, turpentine |  |            |           |           |           | 0.09±0.05  |             |
| γ-Muurolene        | 1519             | oil              | 0.82±0.41                                |            |           | 0.78±0.52 |           |            |             |
| γ-Terpinene        | 1058             | lemon            | 0.87±0.73                                | 3.75±0.54  |           | 0.21±0.04 | 1.6±0.28  | 0.21±0.006 | 0.20±0.007  |
| Amorpha-4,11-diene | 1477             | nd               |  |            |           |           |           |            |             |
| Aristolene         | 1418             | nd               | 5.34±1.31                                |            | 1.97±1.27 | 1.8±0.58  |           |            |             |
| Terpinen-4-ol      | 1179             | turpentine, must |  |            |           | 1.99±0.16 | 0.90±0.06 |            |             |
| β-Elementene       | 1393             | Woody, herb      |  |            |           |           | 0.22±0.02 |            |             |
| 2-Bornanone        | 1146             | nd               | 0.13±0.07                                | 0.17±0.01  |           |           | 0.30±0.03 |            |             |
| β-Famesene         | 1458             | nd               |  |            |           |           | 0.43±0.20 |            |             |
| Camphene           | 920              | camphor          | 0.05±0.04                                | 0.23±0.05  |           |           |           |            |             |
| Caryophyllene      | 1419             | wood, spice      |  |            |           |           | 0.43±0.05 | 0.78±0.33  |             |
| Copaene            | 1376             | wood, spice      |  |            |           |           | 0.12±0.01 | 0.16±0.09  |             |
| D-Limonene         | 1028             | citrus, mint     |  |            | 0.64±0.19 |           | 9.8±2.16  | 0.83±0.03  |             |
| Eucalyptol         | 1030             | nd               | 0.77±0.22                                | 1.56±0.35  | 0.16±0.03 |           | 0.35±0.11 | 0.22±0.01  | 0.086±0.009 |
| Humulene           | 1453             | wood             |  |            |           | 0.20±0.03 |           |            |             |
| Isolongifolene     | 1398             |                  |  | 0.10±0.022 |           |           |           |            |             |
| β-Ocimene          | 1038             | citrus, flower   |  |            |           |           | 0.28±0.19 |            |             |
| α-Curcumene        | 1486             | herb             |  |            |           | 0.29±0.05 | 0.51±0.29 |            |             |
| α-Thujene          | 891              | wood, green      | 1.45±1.0                                 | 1.06±0.17  |           |           |           |            |             |
| β-Barbatene        | 1442             | nd               | 1.68±0.58                                |            | 1.74±0.47 |           |           | 0.50±0.12  |             |
| β-Isocomene        | 1406             | nd               |  |            |           |           |           | 0.25±0.06  |             |
| β-Maaliene         | 1380             | nd               |  |            |           |           |           | 2.11±0.25  |             |
| β-Sabinene         | 958              | turpentine, wood | 3.97±0.98                                | 5.19±0.77  | 0.30±0.07 | 0.76±0.08 | 0.80±0.14 | 0.57±0.05  | 1.13±0.13   |
| γ-Gurjunene        | 1439             | wood, balsamic   |  |            |           |           |           |            |             |

| Compounds                     | LRI <sup>a</sup> | Odor description | Relative peak area (%) ± SD <sup>b</sup> |           |           |            |           |           |
|-------------------------------|------------------|------------------|--|-----------|-----------|------------|-----------|-----------|
|                               |                  |                  | SCC                                      | PLO       | PLC       | AUD        | LES       | LED       |
| <b>Acid</b>                   |                  |                  |  |           |           |            |           |           |
| Acetic acid                   | nd               | sour             |  |           |           | 47.81±3.05 |           |           |
| 3-Methyl-4-oxo-pentanoic acid | nd               | nd               |  |           |           | 0.55±0.2   |           |           |
| Butanoic acid, 3-methyl-      | 851.99           | sweaty           | 1.53±0.48                                |           |           |            |           |           |
| <b>Aldehyde</b>               |                  |                  |  |           |           |            |           |           |
| Benzaldehyde                  | 944.35           | almond           |  |           |           | 2.06±0.51  | 0.94±0.57 | 0.87±0.39 |
| Benzaldehyde, 3-methyl-       | 1085.4           | nd               |  |           |           |            |           |           |
| Butanal, 2-methyl-            | nd               | black truffle    |  | 0.39±0.23 |           |            | 0.36±0.03 |           |
| Butanal, 3-methyl-            | nd               | fatty, malty     |  | 0.36±0.07 | 0.04±0.02 |            | 0.17±0.01 |           |
| Decanal                       | 1208.2           | soap, orange     |  |           |           | 0.35±0.02  |           | 0.23±0.14 |
| Furfural                      | nd               | Almond, burnt    |  |           |           |            |           |           |
| Heptanal                      | 860.4            | fat, citrus      |  | 0.20±0.05 |           |            |           |           |

| Compounds                                     | LRI <sup>a</sup> | Odor description     | Relative peak area (%) $\pm$ SD <sup>b</sup> |                 |                 |                 |                  |                 |
|---|------------------|----------------------|--|-----------------|-----------------|-----------------|------------------|-----------------|
|   |                  |                      | SCC  | PLO             | PLC             | AUD             | LES              | LED             |
| Hexanal                                       | nd               | grass, fat           |  | 1.22 $\pm$ 0.03 | 0.13 $\pm$ 0.02 | 0.13 $\pm$ 0.01 | 0.51 $\pm$ 0.08  | 0.39 $\pm$ 0.25 |
| Nonanal                                       | 1106             | fat, citrus, green   |  | 3.74 $\pm$ 0.23 |                 |                 |                  |                 |
| Octanal                                       | 1004.1           | fat, lemon, green    |  | 0.12 $\pm$ 0.04 | 0.32 $\pm$ 0.20 | 0.08 $\pm$ 0.02 | 0.06 $\pm$ 0.001 |                 |
| Pentanal                                      | nd               | almond, malt         |  |                 |                 |                 |                  |                 |
| Pentanal, 2-methyl-                           | nd               | nd                   |  |                 |                 |                 | 0.35 $\pm$ 0.18  |                 |
| <b>Alcohol</b>                                |                  |                      |  |                 |                 |                 |                  |                 |
| 1-Butanol                                     | nd               | fruit                |  |                 |                 |                 |                  |                 |
| 1-Butanol, 2-methyl-                          | nd               | onion                |  |                 |                 |                 | 3.40 $\pm$ 0.21  |                 |
| 1-Butanol, 2-methyl-, acetate                 | 832.42           | nd                   |  |                 |                 | 1.53 $\pm$ 0.20 |                  |                 |
| 1-Butanol, 2,3-dimethyl-                      | nd               | nd                   |  |                 |                 |                 | 0.26 $\pm$ 0.02  | 0.16 $\pm$ 0.02 |
| 1-Butanol, 3-methyl-                          | nd               | nd                   | 0.76 $\pm$ 0.22                              | 1.17 $\pm$ 0.89 | 0.41 $\pm$ 0.07 | 1.30 $\pm$ 0.03 | 2.51 $\pm$ 0.05  | 0.37 $\pm$ 0.19 |
| 1-Butanol, 3-methyl-, acetate                 | 829.43           | nd                   |  | 0.16 $\pm$ 0.02 |                 | 2.45 $\pm$ 0.25 | 0.34 $\pm$ 0.02  |                 |
| 1-Decanol, 2-hexyl-                           | 1361.4           | nd                   | 0.23 $\pm$ 0.05                              |                 |                 |                 |                  |                 |
| 1-Hexanol                                     | 822.34           | resin, flower, green |  | 0.95 $\pm$ 0.10 |                 |                 | 2.26 $\pm$ 0.18  | 1.33 $\pm$ 0.37 |
| 2-Ethyl-1-hexanol                             | 1031.7           | fresh, citrus        | 2.47 $\pm$ 0.92                              | 0.42 $\pm$ 0.04 | 1.05 $\pm$ 0.27 | 2.96 $\pm$ 0.34 | 0.32 $\pm$ 0.02  | 1.40 $\pm$ 0.04 |
| 1-Octen-3-ol                                  | 973.8            | mushroom             | 6.5 $\pm$ 3.14                               | 0.58 $\pm$ 0.05 | 4.53 $\pm$ 0.77 |                 | 8.77 $\pm$ 0.38  | 1.36 $\pm$ 0.26 |
| 1-Pentanol                                    | nd               | fruit                |  |                 |                 |                 | 0.69 $\pm$ 0.04  |                 |
| 1,4-Benzenediol, 2-methyl-                    | 1021.5           | nd                   |  | 0.65 $\pm$ 0.04 |                 |                 |                  |                 |
| 2-Pentanol, 4-methyl-                         | nd               | nd                   | 0.23 $\pm$ 0.01                              | 0.12 $\pm$ 0.03 | 0.12 $\pm$ 0.05 |                 | 0.26 $\pm$ 0.06  | 0.15 $\pm$ 0.02 |
| 3-Octanol                                     | 997.59           | mushroom             | 0.49 $\pm$ 0.1                               |                 | 2.67 $\pm$ 0.92 | 0.34 $\pm$ 0.01 | 1.71 $\pm$ 0.16  |                 |
| <i>cis</i> -Chrysanthemyl alcohol             | 1483             | nd                   | 1.23 $\pm$ 0.13                              |                 |                 |                 |                  |                 |
| Cyclohexanol, 2-methyl                        | 908.51           | nd                   |  |                 | 0.21 $\pm$ 0.09 |                 | 0.24 $\pm$ 0.04  |                 |
| Cyclohexanol, 2-methyl-                       | 916.93           | nd                   |  |                 |                 |                 |                  |                 |
| Ethanol                                       | nd               | pungent              | 0.24 $\pm$ 0.05                              | 0.05 $\pm$ 0.02 |                 |                 |                  | 0.08728         |
| Ethanol, 2-methoxy-, acetate                  | nd               | nd                   |  |                 |                 | 0.17 $\pm$ 0.02 |                  |                 |
| Linalool                                      | 1101.5           | flower               |  |                 |                 |                 |                  |                 |
| Linalool, formate                             | 1102.1           | nd                   |  |                 |                 |                 |                  |                 |
| Menthol                                       | 1175.1           | peppermint           |  |                 |                 |                 |                  |                 |
| <b>Esther</b>                                 |                  |                      |  |                 |                 |                 |                  |                 |
| 2-Propenoic acid, butyl ester                 | 854.89           | nd                   |  |                 |                 | 0.50 $\pm$ 0.06 |                  |                 |
| 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate | 1601             | nd                   |  |                 |                 |                 |                  |                 |
| Acetic acid, 2-ethylhexyl ester               | 1153             | nd                   |  |                 |                 | 0.59 $\pm$ 0.06 |                  |                 |
| Acetic acid, butyl ester                      | nd               | nd                   |  |                 |                 | 0.18 $\pm$ 0.02 |                  |                 |
| Acetic acid, methyl ester                     | nd               | acid                 |  |                 |                 | 0.22 $\pm$ 0.04 | 0.04 $\pm$ 0.005 |                 |
| Formic acid, 2-ethylhexyl ester               | 1082             | nd                   |  |                 |                 |                 |                  |                 |
| Hexanoic acid, methyl ester                   | 892.61           | nd                   |  |                 |                 |                 |                  | 1.88403         |
| Isobutyl acetate                              | nd               | fruit, apple         |  |                 |                 | 0.78133         |                  |                 |
| Methyl isovalerate                            | nd               | nd                   | 1.01 $\pm$ 0.19                              | 0.39 $\pm$ 0.15 |                 |                 | 0.19 $\pm$ 0.01  |                 |
| Nonanoic acid, methyl ester                   | 1227             | nd                   |  | 0.41 $\pm$ 0.02 |                 |                 |                  |                 |
| Propanoic acid, 2-methyl-, butyl ester        | 996.66           | nd                   |  |                 |                 |                 |                  |                 |
| <b>Ether</b>                                  |                  |                      |  |                 |                 |                 |                  |                 |
| Eicosyl isopropyl ether                       | 1498             | nd                   | 0.79 $\pm$ 0.35                              |                 | 0.32 $\pm$ 0.18 |                 |                  |                 |
| <i>n</i> -Butyl ether                         | 835              | nd                   | 0.66 $\pm$ 0.06                              | 0.85 $\pm$ 0.10 | 0.14 $\pm$ 0.03 |                 | 0.26 $\pm$ 0.16  | 0.51 $\pm$ 0.14 |
| <b>Heterocyclic</b>                           |                  |                      |  |                 |                 |                 |                  |                 |
| 2-Furancarboxaldehyde, 5-methyl-              | 932              | nd                   |  |                 |                 | 1.39 $\pm$ 0.12 |                  |                 |
| 2,4-Dimethylfuran                             | nd               | nd                   |  | 0.08 $\pm$ 0.03 | 0.07 $\pm$ 0.01 |                 |                  |                 |
| 2(3 <i>H</i> )-Furanone, dihydro-5-methyl-    | 944              | nd                   |  | 6.1 $\pm$ 1.32  |                 |                 |                  |                 |
| Furan, 2-pentyl-                              | 988              | nd                   |  | 4.14 $\pm$ 0.29 | 1.74 $\pm$ 0.47 | 0.42 $\pm$ 0.04 | 3.13 $\pm$ 0.08  | 1.63 $\pm$ 1.4  |
| Piperazine, 2-methyl-                         | nd               | nd                   |  |                 |                 |                 |                  |                 |
| Pyrazine, 2,5-dimethyl-                       | 876              | nd                   |  | 0.70 $\pm$ 0.24 |                 |                 |                  |                 |

| Compounds                                     | LRI <sup>a</sup> | Odor description | Relative peak area (%) $\pm$ SD <sup>b</sup> |                  |                   |                   |                   |                  |
|---|------------------|------------------|--|------------------|-------------------|-------------------|-------------------|------------------|
|   |                  |                  | SCC  | PLO              | PLC               | AUD               | LES               | LED              |
| Pyrazine, 2,6-dimethyl-                       | 877              | nd               |  |                  | 1.62 $\pm$ 0.37   |                   | 1.03 $\pm$ 0.18   |                  |
| <b>Hydrocarbon</b>                            |                  |                  |  |                  |                   |                   |                   |                  |
| 1-Tridecene                                   | 1290             | nd               |  |                  |                   |                   |                   |                  |
| 1-Undecene                                    | 1090             | nd               |  |                  |                   |                   |                   |                  |
| 1-Octene                                      | nd               | nd               |  |                  |                   | 0.025 $\pm$ 0.01  |                   |                  |
| 1,3,5,7-Cyclooctatetraene                     | 846              | nd               |  | 1.96 $\pm$ 0.04  |                   |                   |                   |                  |
| 2,4-Dimethyl-1-heptene                        | nd               | nd               |  |                  | 0.08 $\pm$ 0.05   | 0.54 $\pm$ 0.07   | 0.05 $\pm$ 0.004  | 0.09 $\pm$ 0.05  |
| Cyclohexane, 1-methylene-4-(1-methylethenyl)- | 1027             | nd               | 4.31 $\pm$ 0.08                              | 4.02 $\pm$ 0.45  | 0.66 $\pm$ 0.10   |                   | 1.62 $\pm$ 0.03   |                  |
| Cyclopentane, decyl-                          | 1653             | nd               |  |                  | 0.06033           |                   |                   |                  |
| Decane  | 1115             | alkane           |  |                  |                   |                   |                   |                  |
| Decane, 3,7-dimethyl-                         | 1100             | nd               | 3.63 $\pm$ 0.82                              |                  | 3.0 $\pm$ 1.8     |                   | 5.9 $\pm$ 3.39    |                  |
| Decane, 5,6-dimethyl-                         | 1087             | nd               |  |                  |                   |                   | 0.14 $\pm$ 0.01   |                  |
| Dodecane                                      | 1198             | alkane           | 0.22 $\pm$ 0.01                              | 0.29 $\pm$ 0.02  | 0.16 $\pm$ 0.02   |                   | 0.14 $\pm$ 0.02   | 0.29 $\pm$ 0.01  |
| Dodecane, 2,6,10-trimethyl-                   | 1106             | nd               |  | 1.47 $\pm$ 0.82  |                   |                   |                   | 2.58 $\pm$ 1.5   |
| Dodecane, 2,6,11-trimethyl-                   | 1278             | nd               | 3.51 $\pm$ 0.17                              | 2.6 $\pm$ 0.13   | 2.27 $\pm$ 0.53   | 1.47 $\pm$ 0.17   | 3.250 $\pm$ 0.05  | 3.33 $\pm$ 0.17  |
| Dodecane, 4-methyl-                           | 1323             | nd               | 1.04 $\pm$ 0.08                              | 0.46 $\pm$ 0.10  | 0.69 $\pm$ 0.11   | 1.39 $\pm$ 0.50   | 2.3 $\pm$ 1.0     | 0.90 $\pm$ 0.04  |
| Dodecane, 4,6-dimethyl-                       | 1323             | nd               |  |                  | 1.98 $\pm$ 1.1    | 0.19 $\pm$ 0.02   |                   |                  |
| Eicosane                                      | 1544             | alkane           |  |                  | 0.75 $\pm$ 0.38   | 0.27 $\pm$ 0.07   |                   | 0.1456           |
| Heneicosane                                   | 1494             | alkane           |  |                  |                   | 0.280383          |                   |                  |
| Heptadecane                                   | 1494             | alkane           |  | 0.08 $\pm$ 0.04  | 0.47 $\pm$ 0.3    |                   | 0.29 $\pm$ 0.17   |                  |
| Heptane                                       | nd               | alkane           |  | 0.26 $\pm$ 0.09  |                   |                   | 0.34 $\pm$ 0.07   |                  |
| Heptane, 2,2,4,6,6-pentamethyl-               | 980              | nd               |  |                  |                   |                   |                   |                  |
| Heptane, 2,3-dimethyl-                        | nd               | nd               |  |                  | 0.02 $\pm$ 0.003  |                   | 0.03 $\pm$ 0.001  | 0.03 $\pm$ 0.01  |
| Heptane, 2,4-dimethyl-                        | nd               | nd               |  | 0.10 $\pm$ 0.08  | 0.25 $\pm$ 0.05   | 0.23 $\pm$ 0.01   | 0.37 $\pm$ 0.02   | 0.34 $\pm$ 0.02  |
| Hexadecane                                    | 1323             | alkane           | 1.62 $\pm$ 0.09                              | 2.36 $\pm$ 1.35  |                   | 0.14 $\pm$ 0.08   | 2.2 $\pm$ 1.11    |                  |
| Hexane, 2,3,4-trimethyl-                      | nd               | nd               |  |                  | 0.31 $\pm$ 0.04   | 0.24 $\pm$ 0.18   | 0.69 $\pm$ 0.04   | 0.66 $\pm$ 0.06  |
| <i>n</i> -hexane                              | nd               | alkane           | 0.06 $\pm$ 0.03                              |                  | 0.02 $\pm$ 0.006  |                   |                   | 0.1405           |
| Nonadecane                                    | 1291             | alkane           |  | 0.95 $\pm$ 0.54  |                   |                   |                   |                  |
| Nonane  | 854              | alkane           |  | 0.31 $\pm$ 0.08  | 0.07 $\pm$ 0.04   |                   |                   |                  |
| Nonane, 3-methylene-                          | 971              | nd               |  |                  |                   |                   |                   | 0.56 $\pm$ 0.08  |
| Nonane, 4,5-dimethyl-                         | 1106             | nd               |  |                  | 0.07 $\pm$ 0.02   |                   | 0.11 $\pm$ 0.03   |                  |
| Nonane, 5-butyl-                              | 1099             | nd               |  | 0.34 $\pm$ 0.04  | 0.31 $\pm$ 0.28   | 0.36 $\pm$ 0.18   |                   |                  |
| Octane, 2,3,6,7-tetramethyl-                  | 1092             | nd               | 0.64 $\pm$ 0.01                              | 0.17 $\pm$ 0.10  | 0.5 $\pm$ 0.33    |                   | 1.55 $\pm$ 0.04   | 0.55 $\pm$ 0.30  |
| Octane, 3,3-dimethyl-                         | 1007             | nd               |  |                  |                   | 0.33 $\pm$ 0.02   |                   |                  |
| Octane, 6-ethyl-2-methyl-                     | 1100             | nd               | 3.5 $\pm$ 2.0                                | 2.15 $\pm$ 0.17  | 0.19 $\pm$ 0.07   | 0.34 $\pm$ 0.98   | 3.56 $\pm$ 2.0    | 3.46 $\pm$ 0.19  |
| Pentane, 3-methyl-                            | nd               | nd               |  | 1.21 $\pm$ 0.69  | 0.56 $\pm$ 0.5    |                   |                   | 0.05763          |
| Propane, 1-(ethenyloxy)-2-methyl-             | nd               | nd               | 0.56 $\pm$ 0.16                              |                  |                   |                   |                   |                  |
| Tetradecane                                   | 1398             | alkane           |  | 0.14 $\pm$ 0.006 | 0.07 $\pm$ 0.02   | 0.05 $\pm$ 0.02   |                   | 0.18 $\pm$ 0.02  |
| Tetradecane, 1-chloro-                        | 1419             | nd               |  |                  | 0.080 $\pm$ 0.02  |                   |                   |                  |
| Tetradecane, 4-methyl-                        | 1316             | nd               |  |                  |                   |                   |                   | 0.46 $\pm$ 0.27  |
| Trichloromethane                              | nd               | nd               | 0.27 $\pm$ 0.04                              |                  | 0.03 $\pm$ 0.001  |                   | 0.094 $\pm$ 0.009 | 0.12 $\pm$ 0.05  |
| Undecane, 2,3-dimethyl-                       | 1169             | nd               |  |                  |                   |                   |                   | 0.10 $\pm$ 0.004 |
| Undecane, 2,4-dimethyl-                       | 1262             | nd               |  |                  | 0.042 $\pm$ 0.004 | 0.094 $\pm$ 0.001 |                   |                  |
| Undecane, 4-methyl-                           | 1114             | nd               | 0.74 $\pm$ 0.04                              | 0.50 $\pm$ 0.005 | 0.56 $\pm$ 0.18   | 0.55 $\pm$ 0.05   | 1.02 $\pm$ 0.013  | 0.73 $\pm$ 0.08  |
| Undecane, 4,6-dimethyl-                       | 1212             | nd               |  |                  |                   | 0.12 $\pm$ 0.11   |                   |                  |
| Undecane, 4,8-dimethyl-                       | 1340             | nd               |  |                  |                   |                   |                   |                  |
| Azulene                                       | 1185             | nd               |  | 2.25 $\pm$ 1.31  |                   |                   |                   | 2.78 $\pm$ 0.35  |
| Benzene, 1-ethyl-3-methyl-                    | 1021             | nd               |  | 0.17 $\pm$ 0.10  | 0.12 $\pm$ 0.01   |                   |                   |                  |
| Benzene, 1,2,3-trimethyl-                     | 989              | nd               | 0.59 $\pm$ 0.39                              |                  |                   |                   | 0.10 $\pm$ 0.06   |                  |
| Benzene, 1,2,4-trimethyl-                     | 953              | nd               | 0.09 $\pm$ 0.05                              |                  | 0.07 $\pm$ 0.02   |                   |                   |                  |
| Benzene, 1,2,4,5-tetramethyl-                 | 1120             | nd               |  |                  | 0.07 $\pm$ 0.012  |                   | 0.05 $\pm$ 0.001  | 0.10 $\pm$ 0.02  |

| Compounds                                  | LRI <sup>a</sup> | Odor description | Relative peak area (%) $\pm$ SD <sup>b</sup> |                 |                 |                  |                  |                  |
|--|------------------|------------------|--|-----------------|-----------------|------------------|------------------|------------------|
|  |                  |                  | SCC  | PLO             | PLC             | AUD              | LES              | LED              |
| Benzene, 1,3-dichloro-                     | 1012             | nd               | 0.51 $\pm$ 0.02                              | 0.39 $\pm$ 0.06 | 2.3 $\pm$ 1.57  | 0.82 $\pm$ 0.08  | 0.42 $\pm$ 0.03  | 0.66 $\pm$ 0.45  |
| Benzene, 1-ethenyl-3-ethyl-                | 1150             | nd               |  |                 | 0.07 $\pm$ 0.04 |                  |                  | 0.11 $\pm$ 0.06  |
| Benzene, <i>tert</i> -butyl-               | 1086             | nd               |  |                 | 0.40 $\pm$ 0.11 |                  | 0.23 $\pm$ 0.13  |                  |
| Cyclohexene, 1-methyl-5-(1-methylethenyl)- | 1027             | nd               |  |                 |                 | 0.22 $\pm$ 0.02  |                  |                  |
| Ethylbenzene                               | nd               | nd               |  | 0.40 $\pm$ 0.19 |                 |                  |                  |                  |
| <i>o</i> -Cymene                           | 1024             | citrus           |  |                 | 0.20 $\pm$ 0.02 |                  |                  |                  |
| <i>o</i> -Xylene                           | 819              | geranium         | 0.57 $\pm$ 0.01                              |                 |                 | 0.11 $\pm$ 0.015 |                  |                  |
| <i>p</i> -Cymene                           | 1024             | citrus           | 0.76 $\pm$ 0.05                              | 0.96 $\pm$ 0.1  |                 |                  | 0.32 $\pm$ 0.005 | 0.68 $\pm$ 0.37  |
| <b>Ketone</b>                              |                  |                  |  |                 |                 |                  |                  |                  |
| 2-Cyclopenten-1-one, 2,3-dimethyl-         | 817              | nd               |  | 0.51 $\pm$ 0.02 |                 |                  |                  |                  |
| 2-Decanone                                 | 1196             | nd               |  |                 |                 |                  |                  |                  |
| 2-Nonanone                                 | 1095             | alkane           |  |                 |                 |                  |                  |                  |
| 3-Ethylcyclopentanone                      | 939              | nd               |  |                 |                 |                  |                  |                  |
| 3-Hexanone, 4-methyl-                      | nd               | nd               |  |                 | 0.05 $\pm$ 0.03 |                  |                  |                  |
| 3-Octanone                                 | 983              | fruity, sweet    | 1.34 $\pm$ 0.68                              |                 | 2.17 $\pm$ 0.73 | 0.63 $\pm$ 0.05  | 3.16 $\pm$ 0.18  | 0.95 $\pm$ 0.05  |
| 5-Hepten-2-one, 6-methyl-                  | 985              | nd               |  |                 |                 |                  |                  |                  |
| 2-undecanone                               | 1295             | fruit            |  |                 |                 |                  |                  |                  |
| 6-Undecanone                               | 1274             | fruit            |  |                 |                 |                  |                  |                  |
| Butyrolactone                              | 889              | nd               |  |                 |                 |                  |                  | 2.07 $\pm$ 0.18  |
| Ethanone, 1-(3-methylphenyl)-              | 1086             | nd               |  |                 |                 |                  |                  | 0.69 $\pm$ 0.18  |
| <b>Sulfur</b>                              |                  |                  |  |                 |                 |                  |                  |                  |
| Dimethyl trisulfide                        | 954              | sulfur           | 0.28 $\pm$ 0.13                              |                 |                 |                  |                  |                  |
| Dimethyl disulfide                         | nd               | nd               | 0.32 $\pm$ 0.07                              |                 |                 |                  |                  |                  |
| <b>Terpenoid</b>                           |                  |                  |  |                 |                 |                  |                  |                  |
| $\alpha$ -Phellandrene                     | 1002             | dill             | 0.77 $\pm$ 0.05                              | 0.33 $\pm$ 0.06 | 0.41 $\pm$ 0.2  |                  | 0.30 $\pm$ 0.02  | 0.66 $\pm$ 0.01  |
| $\alpha$ -Pinene                           | 900              | pine, turpentine | 0.80 $\pm$ 0.03                              | 1.0 $\pm$ 0.16  | 0.36784         | 0.06 $\pm$ 0.05  | 0.39 $\pm$ 0.03  | 0.53 $\pm$ 0.19  |
| $\beta$ -Bisabolene                        | 1513             | balsamic         |  | 0.90 $\pm$ 0.30 | 0.82 $\pm$ 0.56 |                  | 2.82 $\pm$ 0.07  |                  |
| $\beta$ -Guaiene                           | 1309             | wood, balsamic   |  |                 |                 |                  |                  |                  |
| $\beta$ -Longipinene                       | 1400             | pine, turpentine | 0.52 $\pm$ 0.27                              |                 |                 |                  |                  |                  |
| $\beta$ -Myrcene                           | 986              | balsamic, must   | 1.46 $\pm$ 0.14                              |                 |                 |                  |                  |                  |
| $\beta$ -Pinene                            | 962              | pine, turpentine |  |                 |                 |                  |                  |                  |
| $\gamma$ -Murolene                         | 1519             | oil              |  |                 |                 |                  |                  |                  |
| $\gamma$ -Terpinene                        | 1058             | lemon            | 0.85 $\pm$ 0.03                              | 0.52 $\pm$ 0.08 | 0.49 $\pm$ 0.06 |                  | 0.34 $\pm$ 0.20  | 0.60 $\pm$ 0.48  |
| Amorpha-4,11-diene                         | 1477             | nd               |  |                 |                 |                  | 0.23 $\pm$ 0.007 |                  |
| Aristolene                                 | 1418             | nd               |  |                 |                 |                  |                  |                  |
| Terpinen-4-ol                              | 1179             | turpentine, must |  |                 |                 |                  |                  |                  |
| $\beta$ -Elemene                           | 1393             | Woody, herb      |  |                 |                 |                  |                  |                  |
| 2-Bornanone                                | 1146             | nd               | 0.05 $\pm$ 0.03                              |                 |                 | 0.05 $\pm$ 0.02  |                  |                  |
| $\beta$ -Famesene                          | 1458             | nd               |  |                 |                 |                  |                  |                  |
| Camphene                                   | 920              | camphor          | 0.16 $\pm$ 0.01                              |                 | 0.06 $\pm$ 0.03 |                  | 0.45 $\pm$ 0.023 | 0.06 $\pm$ 0.007 |
| Caryophyllene                              | 1419             | wood, spice      | 0.20 $\pm$ 0.03                              |                 | 0.58 $\pm$ 0.05 |                  |                  |                  |
| Copaene                                    | 1376             | wood, spice      |  |                 |                 |                  |                  |                  |
| D-Limonene                                 | 1028             | citrus, mint     |  |                 |                 |                  |                  | 6.3 $\pm$ 4.3    |
| Eucalyptol                                 | 1030             | nd               | 0.89 $\pm$ 0.06                              | 0.71 $\pm$ 0.07 |                 | 0.07 $\pm$ 0.01  | 0.35 $\pm$ 0.01  | 0.46 $\pm$ 0.25  |
| Humulene                                   | 1453             | wood             |  |                 |                 |                  |                  |                  |
| Isolongifolene                             | 1398             |                  |  |                 |                 |                  |                  |                  |
| $\beta$ -Ocimene                           | 1038             | citrus, flower   |  |                 |                 |                  |                  |                  |
| $\alpha$ -Curcumene                        | 1486             | herb             |  |                 |                 |                  |                  |                  |
| $\alpha$ -Thujene                          | 891              | wood, green      | 0.55 $\pm$ 0.06                              |                 | 0.07 $\pm$ 0.02 |                  |                  |                  |
| $\beta$ -Barbatene                         | 1442             | nd               |  |                 |                 | 0.25 $\pm$ 0.12  |                  |                  |
| $\beta$ -Isocomene                         | 1406             | nd               |  |                 | 0.06 $\pm$ 0.03 |                  |                  |                  |

| Compounds           | LRI <sup>a</sup> | Odor description | Relative peak area (%) $\pm$ SD <sup>b</sup> |                 |                 |                 |                  |                 |
|---------------------|------------------|------------------|--|-----------------|-----------------|-----------------|------------------|-----------------|
|                     |                  |                  | SCC  | PLO             | PLC             | AUD             | LES              | LED             |
| $\beta$ -Maaliene   | 1380             | nd               |  |                 |                 |                 |                  |                 |
| $\beta$ -Sabinene   | 958              | turpentine, wood | 4.87 $\pm$ 0.09                              | 5.87 $\pm$ 0.89 | 0.73 $\pm$ 0.11 | 0.46 $\pm$ 0.13 | 1.78 $\pm$ 0.07  | 3.07 $\pm$ 0.96 |
| $\gamma$ -Gurjunene | 1439             | wood, balsamic   |  |                 |                 |                 | 0.16 $\pm$ 0.007 |                 |

<sup>a</sup>LRI, calculated by comparing the compound retention time on the DB-5 column to the retention time of the series of alkane standard solution

<sup>b</sup>% peak relative area, obtained from three replication measurement using GC-MS

<sup>c</sup>(for abbreviation see Table 1)

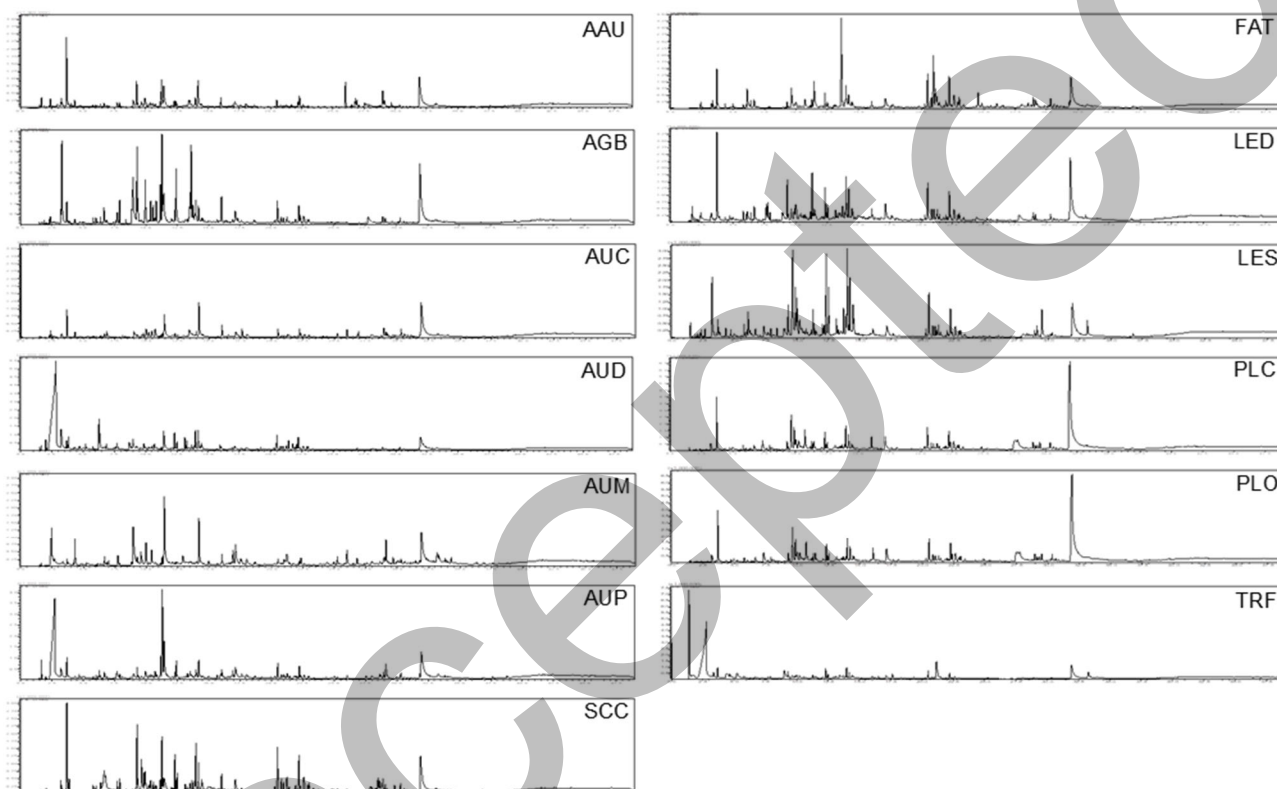


Fig S1. GC-MS Chromatogram of thirteen Indonesia Culinary mushrooms