**Supplementary Information**

**Catalytic pyrolysis of soybean oil with CaO/bio-char based catalyst to produce high quality biofuel**

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| Table S1. The detailed GC-MS peak area of bio-oil from direct pyrolysis of soybean oil without catalyst | | | |
| No. | Retention time  (min) | Compound name | Peak area (%) |
| 1 | 4.133 | Toluene | 0.10 |
| 2 | 4.613 | 1-Octene | 0.12 |
| 3 | 4.932 | 2-Octene, (Z)- | 0.07 |
| 4 | 5.329 | Cyclooctene | 0.15 |
| 5 | 6.075 | Ethylbenzene | 0.08 |
| 6 | 6.676 | 1-Nonene | 0.11 |
| 7 | 6.824 | Cyclooctene | 0.61 |
| 8 | 7.352 | Cyclobutene, 3,3-dimethyl- | 0.09 |
| 9 | 8.59 | 1-Decene | 0.12 |
| 10 | 10.083 | Heptanoic acid | 0.55 |
| 11 | 10.312 | 1-Undecene | 0.19 |
| 12 | 10.534 | 2-Undecene, (E)- | 0.14 |
| 13 | 10.858 | Cyclooctene | 0.08 |
| 14 | 11.274 | Bicyclo[2.2.1]hept-2-ene, 2,3-dimethyl- | 0.25 |
| 15 | 11.419 | 1(2H)-Pentalenone, hexahydro-5-methyl-4-methylene- | 0.53 |
| 16 | 11.554 | Octanoic acid | 0.10 |
| 17 | 11.88 | Cyclododecane | 0.15 |
| 18 | 12.382 | 1,5,9-Cyclododecatriene, (E,E,Z)- | 0.27 |
| 19 | 13.08 | 6,6-Dimethyl-cyclooct-4-enone | 0.08 |
| 20 | 13.331 | 1-Tridecene | 0.10 |
| 21 | 14.194 | Bicyclo[3.1.0]hexan-3-one, 4-methyl-1-(1-methylethyl)-, [1S-(1.alpha.,4.beta.,5.alpha.)]- | 0.12 |
| 22 | 14.331 | n-Decanoic acid | 0.48 |
| 23 | 14.687 | 1-Hexadecanol | 0.33 |
| 24 | 15.96 | 1-Tetradecanol | 0.10 |
| 25 | 16.055 | Heptadecane | 0.26 |
| 26 | 16.964 | Cyclohexene, 1-octyl- | 0.26 |
| 27 | 16.988 | 9,12-Octadecadien-1-ol, (Z,Z)- | 0.35 |
| 28 | 17.167 | 1-Hexadecanol | 0.18 |
| 29 | 18.078 | Bicyclo[2.2.2]octane, 2-methyl- | 0.38 |
| 30 | 18.151 | 9-Nonadecene | 0.65 |
| 31 | 18.211 | Cyclododecene | 0.23 |
| 32 | 18.382 | Nonadecane | 0.12 |
| 33 | 18.567 | Hexadecanal | 0.12 |
| 34 | 18.728 | Cyclopentane, 1,3-dimethyl- | 0.13 |
| 35 | 20.417 | 9,12-Octadecadienoic acid (Z,Z)- | 0.44 |
| 36 | 20.476 | cis-9-Hexadecenal | 0.80 |
| 37 | 20.527 | 9,12-Octadecadienoic acid (Z,Z)- | 0.47 |
| 38 | 20.752 | Tridecanoic acid, methyl ester | 0.88 |
| 39 | 21.113 | Adipic acid, cyclohexylmethyl butyl ester | 0.09 |
| 40 | 21.194 | Cyclododecene | 0.08 |
| 41 | 21.249 | Cyclododecene | 0.04 |
| 42 | 21.417 | Cyclododecene | 0.12 |
| 43 | 21.469 | Bicyclo[4.1.0]heptan-2-one, 3,5,5-trimethyl- | 0.19 |
| 44 | 21.527 | 9,12-Octadecadien-1-ol, (Z,Z)- | 0.11 |
| 45 | 22.002 | Cyclodecene, 1-methyl- | 1.64 |
| 46 | 22.027 | 1,6-Octadiene, 5,7-dimethyl-, (R)- | 0.41 |
| 47 | 22.106 | Tridecanedial | 0.93 |
| 48 | 22.152 | 9,12-Octadecadienoic acid (Z,Z)- | 0.51 |
| 49 | 22.194 | Triacontyl heptafluorobutyrate | 1.95 |
| 50 | 22.269 | 9,12-Octadecadien-1-ol, (Z,Z)- | 2.48 |
| 51 | 22.324 | Cyclooctene, 1,2-dimethyl- | 1.28 |
| 52 | 22.386 | 9,12-Octadecadienoic acid, methyl ester | 2.62 |
| 53 | 22.436 | E-9-Tetradecenoic acid | 4.04 |
| 54 | 22.509 | 9,12-Octadecadienoic acid (Z,Z)- | 2.53 |
| 55 | 22.579 | 9,12-Octadecadienoic acid (Z,Z)- | 1.71 |
| 56 | 22.656 | Linoelaidic acid | 4.44 |
| 57 | 22.839 | 9,12-Octadecadienoic acid (Z,Z)- | 33.70 |
| 58 | 23.07 | Bicyclo[4.2.0.]octane, 6,7-dimethyl | 5.65 |
| 59 | 23.72 | 5-Tetradecyne | 1.49 |
| 60 | 23.764 | Hexacosyl pentafluoropropionate | 2.60 |
| 61 | 23.797 | 9,12-Octadecadien-1-ol, (Z,Z)- | 1.04 |
| 62 | 23.841 | trans,trans-1,6-Dimethylspiro[4.5]decane | 2.43 |
| 63 | 23.934 | 9,12-Octadecadienoic acid (Z,Z)- | 0.42 |
| 64 | 23.971 | Hexacosyl pentafluoropropionate | 0.54 |
| 65 | 24.046 | Cyclohexane, 2,4-diisopropyl-1,1-dimethyl- | 0.26 |
| 66 | 24.154 | Glycidyl palmitate | 0.77 |
| 67 | 24.704 | Cyclohexene, 4-(4-ethylcyclohexyl)-1-pentyl- | 0.10 |
| 68 | 24.753 | 9,12-Octadecadienoic acid (Z,Z)- | 0.13 |
| 69 | 24.79 | 1-Hexacosanol | 0.30 |
| 70 | 25.151 | Cyclohexene, 1,6-dimethyl- | 0.32 |
| 71 | 25.211 | Bicyclo[2.2.2]octane, 2-methyl- | 1.59 |
| 72 | 25.244 | Bicyclo[4.3.1]decan-10-one | 1.81 |
| 73 | 25.319 | Bicyclo[10.1.0]tridec-1-ene | 0.37 |
| 74 | 25.382 | Bicyclo[2.2.2]octane, 2-methyl- | 0.20 |
| 75 | 25.431 | E,E,Z-1,3,12-Nonadecatriene-5,14-diol | 0.39 |
| 76 | 25.6 | 9,12-Octadecadien-1-ol, (Z,Z)- | 1.16 |
| 77 | 25.627 | Glycidyl palmitoleate | 2.02 |
| 78 | 25.7 | 9,12-Octadecadienoic acid (Z,Z)- | 0.46 |
| 79 | 25.81 | Glycidyl palmitate | 0.30 |
| 80 | 26.169 | 1,13-Tetradecadiene | 1.32 |
| 81 | 26.188 | Cyclododecene | 1.51 |
| 82 | 26.272 | Cytosine | 1.63 |
| 83 | 26.651 | trans-1,10-Dimethyl-trans-9-decalol | 0.82 |
| 84 | 26.739 | Cyclohexane, ethenyl- | 0.17 |
| 85 | 26.84 | Cyclohexene, 1,2-dimethyl- | 0.12 |
| 86 | 27.895 | 9-Octadecenamide, (Z)- | 0.68 |
| 87 | 30.368 | Naphthalene, 1,2,3,4-tetrahydro-1,5-dimethyl- | 0.35 |

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| Table S2.The detailed GC-MS peak area of bio-oil from direct pyrolysis of soybean oil over quartz sand | | | |
| No. | Retention time  (min) | Compound name | Peak area (%) |
| 1 | 4.111 | Toluene | 0.17 |
| 2 | 4.38 | 1,3-Cycloheptadiene | 0.05 |
| 3 | 4.419 | Cyclohexene | 0.10 |
| 4 | 4.591 | 1-Octene | 0.14 |
| 5 | 4.91 | 2-Octene, (E)- | 0.04 |
| 6 | 5.304 | 1,3-Octadiene | 0.14 |
| 7 | 6.051 | Ethylbenzene | 0.10 |
| 8 | 6.143 | Cyclohexene, 3-ethenyl- | 0.04 |
| 9 | 6.654 | 1-Nonene | 0.15 |
| 10 | 6.802 | Cyclooctene | 1.04 |
| 11 | 7.332 | 1,3-Nonadiene, (E)- | 0.13 |
| 12 | 7.768 | Cyclopentene, 1-methyl- | 0.08 |
| 13 | 7.89 | Benzene, propyl- | 0.08 |
| 14 | 8.572 | 1-Decene | 0.18 |
| 15 | 8.98 | 5-Norbornane-2-carboxaldehyde | 0.07 |
| 16 | 9.171 | Heptanoic acid, methyl ester | 0.08 |
| 17 | 9.33 | Bicyclo[3.3.0]oct-2-en-8-one, 3-methyl- | 0.04 |
| 18 | 9.737 | Benzene, n-butyl- | 0.08 |
| 19 | 9.99 | 3-Heptenoic acid | 0.22 |
| 20 | 10.043 | Bicyclo[3.3.0]oct-2-en-8-one, 3-methyl- | 0.14 |
| 21 | 10.1 | Heptanoic acid | 0.35 |
| 22 | 10.299 | 1-Undecene | 0.23 |
| 23 | 10.525 | Cyclohexene, 1-methyl- | 0.07 |
| 24 | 10.638 | Bicyclo[3.3.0]octan-3-one, 7-ethylidene- | 0.03 |
| 25 | 10.845 | 5,6-Undecadiene | 0.14 |
| 26 | 10.988 | Camphenone, 6- | 0.04 |
| 27 | 11.058 | 2-Cyclohexen-1-one, 2-(2-methyl-2-propenyl)- | 0.04 |
| 28 | 11.133 | 5-Pentylcyclohexa-1,3-diene | 0.04 |
| 29 | 11.261 | Cyclopropane, 1-ethenyl-2-hexenyl-, [1.alpha.,2.beta.(E)]-(.+/-.)- | 0.23 |
| 30 | 11.406 | 5-Pentylcyclohexa-1,3-diene | 0.43 |
| 31 | 11.452 | 7-Octenoic acid | 0.07 |
| 32 | 11.554 | Octanoic acid | 0.09 |
| 33 | 11.869 | 1-Dodecene | 0.21 |
| 34 | 12.368 | Cyclododecene, (Z)- | 0.40 |
| 35 | 12.527 | Cyclooctene, 3-(1-methylethenyl)- | 0.10 |
| 36 | 12.804 | Carbonic acid, phenyl propyl ester | 0.06 |
| 37 | 12.886 | Cyclohexene, 1-ethyl- | 0.06 |
| 38 | 12.937 | 5-Dodecen-7-yne, (Z)- | 0.12 |
| 39 | 13.067 | 1H-Imidazole, 4-methyl- | 0.42 |
| 40 | 13.322 | 1-Tridecene | 0.14 |
| 41 | 13.375 | 2-Cyclopenten-1-one, 2-pentyl- | 0.07 |
| 42 | 13.577 | 4-Decenoic acid, methyl ester | 0.05 |
| 43 | 13.773 | Decanoic acid, methyl ester | 0.13 |
| 44 | 14.214 | 9-Decenoic acid | 0.37 |
| 45 | 14.253 | 9-Decenoic acid | 0.11 |
| 46 | 14.355 | n-Decanoic acid | 0.65 |
| 47 | 14.678 | 1-Hexadecanol | 0.41 |
| 48 | 15.152 | 1(2H)-Naphthalenone, octahydro-8a-hydroxy- | 0.03 |
| 49 | 15.467 | Bicyclo[3.3.0]oct-2-en-8-one, 3-methyl- | 0.04 |
| 50 | 15.524 | Cyclopentene, 1-(3-methylbutyl)- | 0.08 |
| 51 | 15.702 | Bicyclo[2.2.2]oct-5-en-2-one | 0.11 |
| 52 | 15.779 | Bicyclo[3.2.1]octane | 0.08 |
| 53 | 15.878 | Bicyclo[2.2.2]octane | 0.07 |
| 54 | 15.953 | 1-Tetradecanol | 0.16 |
| 55 | 16.046 | Heptadecane | 0.07 |
| 56 | 16.768 | Bicyclo[2.2.2]oct-5-en-2-one | 0.03 |
| 57 | 16.876 | Bicyclo[10.1.0]tridec-1-ene | 0.07 |
| 58 | 16.957 | 9,12-Octadecadienoic acid (Z,Z)- | 0.28 |
| 59 | 16.984 | 9,12-Octadecadien-1-ol, (Z,Z)- | 0.42 |
| 60 | 17.158 | 1-Hexadecanol | 0.23 |
| 61 | 17.812 | Bicyclo[10.1.0]tridec-1-ene | 0.05 |
| 62 | 18.072 | 17-Octadecynoic acid | 0.15 |
| 63 | 18.144 | 1-Hexadecanol | 0.31 |
| 64 | 18.204 | Bicyclo[2.2.2]octane, 2-methyl- | 0.11 |
| 65 | 18.301 | 9-Octadecene, (E)- | 0.08 |
| 66 | 18.378 | Heptadecane | 0.05 |
| 67 | 18.561 | Pentadecanal- | 0.26 |
| 68 | 18.721 | 1-Heptene, 2-isohexyl-6-methyl- | 0.22 |
| 69 | 19.382 | 1-Hexadecanol | 0.04 |
| 70 | 20.412 | cis,cis-7,10,-Hexadecadienal | 0.31 |
| 71 | 20.472 | cis-9-Hexadecenal | 1.16 |
| 72 | 20.525 | 9,17-Octadecadienal, (Z)- | 0.57 |
| 73 | 20.69 | Cyclooctene, 3-methyl- | 0.11 |
| 74 | 20.749 | Tridecanoic acid, methyl ester | 1.86 |
| 75 | 21.143 | n-Hexadecanoic acid | 3.22 |
| 76 | 21.243 | Cyclopentane, 1,1,3-trimethyl- | 0.12 |
| 77 | 21.28 | Tetradecanal | 0.17 |
| 78 | 21.331 | Nonacos-1-ene | 0.07 |
| 79 | 21.414 | Cycloheptanol, 2-methylene | 0.13 |
| 80 | 21.465 | Carbonic acid, but-2-yn-1-yl octadecyl ester | 0.08 |
| 81 | 21.522 | Cyclooctene, 1,2-dimethyl- | 0.08 |
| 82 | 21.881 | Ethyl hexatriacontyl ether | 0.05 |
| 83 | 21.947 | Nonacos-1-ene | 0.11 |
| 84 | 22.02 | Cyclopentane, 1,1,3-trimethyl- | 0.31 |
| 85 | 22.101 | Cyclohexaneethanol, .beta.-methylene- | 0.53 |
| 86 | 22.15 | Cyclopentane, 1,1,3-trimethyl- | 0.18 |
| 87 | 22.194 | Isobutyl triacontyl ether | 1.39 |
| 88 | 22.249 | Ethyl tetratriacontyl ether | 0.40 |
| 89 | 22.264 | Dotriacontyl trifluoroacetate | 0.54 |
| 90 | 22.324 | Cyclooctene, 1,2-dimethyl- | 0.72 |
| 91 | 22.385 | Bicyclo[3.3.2]decan-9-one | 2.12 |
| 92 | 22.438 | Methyl (Z)-10-pentadecenoate | 5.88 |
| 93 | 22.511 | 9,12-Octadecadienoic acid, methyl ester | 3.14 |
| 94 | 22.566 | Octadecanal | 1.05 |
| 95 | 22.654 | Tetradecanoic acid, 12-methyl-, methyl ester, (S)- | 2.99 |
| 96 | 22.894 | 9,12-Octadecadienoic acid (Z,Z)- | 34.99 |
| 97 | 23.077 | 9,12-Octadecadienoic acid (Z,Z)- | 3.30 |
| 98 | 23.152 | 9,17-Octadecadienal, (Z)- | 1.81 |
| 99 | 23.211 | 9,12-Octadecadienoic acid (Z,Z)- | 2.56 |
| 100 | 23.464 | 9,12-Octadecadienoic acid (Z,Z)- | 1.43 |
| 101 | 23.722 | 5-Undecyne | 0.89 |
| 102 | 23.766 | 5-Tetradecyne | 2.56 |
| 103 | 23.843 | 6-Tetradecyne | 1.66 |
| 104 | 23.933 | 9,12-Octadecadienoic acid (Z,Z)- | 0.34 |
| 105 | 23.971 | Triacontyl pentafluoropropionate | 0.64 |
| 106 | 24.154 | 9,12-Octadecadienoic acid (Z,Z)- | 0.17 |
| 107 | 24.402 | Bicyclo[2.2.2]octane, 2-methyl- | 0.17 |
| 108 | 24.702 | Tridecanedial | 0.06 |
| 109 | 24.799 | 1,3-Dimethyl-5-n-decylcyclohexane | 0.43 |
| 110 | 25.195 | trans-1,10-Dimethyl-trans-9-decalol | 0.58 |
| 111 | 25.244 | 9,12-Octadecadienoyl chloride, (Z,Z)- | 0.42 |
| 112 | 25.316 | 9,12-Octadecadienoyl chloride, (Z,Z)- | 0.13 |
| 113 | 25.389 | Bicyclo[2.2.2]octane, 2-methyl- | 0.06 |
| 114 | 25.429 | Bicyclo[4.3.1]decan-10-one | 0.24 |
| 115 | 25.497 | 9,12-Octadecadienoyl chloride, (Z,Z)- | 0.08 |
| 116 | 25.625 | Bicyclo[2.2.2]octane, 2-methyl- | 0.23 |
| 117 | 25.765 | Bicyclo[4.3.1]decan-10-one | 0.23 |
| 118 | 25.92 | 9,12-Octadecadienoyl chloride, (Z,Z)- | 0.19 |
| 119 | 26.012 | Bicyclo[2.2.1]heptane, 1,3,3-trimethyl- | 0.24 |
| 120 | 26.193 | Ethanol, 2-(9,12-octadecadienyloxy)-, (Z,Z)- | 0.89 |
| 121 | 26.274 | 3-Aminopyrazine 1-oxide | 2.34 |
| 122 | 26.334 | Pyridine, 2-[(1,1-dimethylethyl)thio]- | 0.90 |
| 123 | 26.45 | p-Fluoroaniline | 0.19 |
| 124 | 26.655 | trans-1,10-Dimethyl-trans-9-decalol | 2.09 |
| 125 | 26.739 | Cyclohexene,3-(1-methylpropyl)- | 0.61 |
| 126 | 26.84 | l-Menthone | 0.16 |
| 127 | 27.893 | 9-Octadecenamide, (Z)- | 0.44 |
| 128 | 29.401 | Cyclopentene, 1-pentyl- | 0.07 |
| 129 | 29.656 | Cyclohexanol, 2-methyl-3-(1-methylethenyl)-, (1.alpha.,2.alpha.,3.alpha.)- | 0.13 |
| 130 | 30.079 | Bicyclo[2.2.1]heptane, 2,2,3-trimethyl-, exo- | 0.07 |
| 131 | 30.37 | Benzene, 1-(1,1-dimethylethyl)-3,5-dimethyl- | 0.34 |

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| Table S3.The detailed GC-MS peak area of bio-oil from direct pyrolysis of soybean oil over CaO/biochar catalyst | | | |
| No. | Retention time  (min) | Compound name | Peak area (%) |
| 1 | 3.327 | Cycloheptene | 0.10 |
| 2 | 4.135 | Toluene | 0.72 |
| 3 | 4.399 | 1,3-Cycloheptadiene | 0.16 |
| 4 | 4.441 | 1,7-Octadiene | 0.10 |
| 5 | 4.611 | 1-Octene | 0.71 |
| 6 | 4.787 | Octane | 0.20 |
| 7 | 4.932 | 2-Octene, (Z)- | 0.21 |
| 8 | 5.329 | 1,3-Octadiene | 0.56 |
| 9 | 6.075 | Ethylbenzene | 0.50 |
| 10 | 6.168 | 1,3-trans,5-cis-Octatriene | 0.13 |
| 11 | 6.238 | p-Xylene | 0.15 |
| 12 | 6.678 | 1-Nonene | 1.31 |
| 13 | 6.826 | Cyclooctene | 1.61 |
| 14 | 7.355 | 1,3-Nonadiene, (E)- | 0.56 |
| 15 | 7.564 | Bicyclo(3.3.1)non-2-ene | 0.16 |
| 16 | 7.788 | Cyclopentene, 1-butyl- | 0.41 |
| 17 | 7.909 | Benzene, propyl- | 0.41 |
| 18 | 8.061 | 2,3-Nonadiene | 0.33 |
| 19 | 8.189 | 5-Hexenal, 4-methylene- | 0.26 |
| 20 | 8.398 | Benzene, 1-ethyl-4-methyl- | 0.36 |
| 21 | 8.447 | Phenol | 0.12 |
| 22 | 8.594 | 1-Decene | 1.40 |
| 23 | 8.649 | Mesitylene | 0.11 |
| 24 | 8.7 | Benzene, 1-propenyl- | 0.25 |
| 25 | 8.746 | Decane | 0.32 |
| 26 | 9.002 | Tricyclo[4.2.1.1(2,5)]dec-3-en-9-ol, stereoisomer | 0.19 |
| 27 | 9.193 | Cyclodecene | 0.42 |
| 28 | 9.396 | Bicyclo[3.3.1]non-2-en-9-one | 0.18 |
| 29 | 9.557 | Benzene, 1-ethynyl-4-methyl- | 0.27 |
| 30 | 9.64 | Cyclohexene, 1-methyl-4-(1-methylethenyl)-, trans- | 0.24 |
| 31 | 9.708 | Phenol, 3-methyl- | 0.11 |
| 32 | 9.755 | Benzene, n-butyl- | 0.48 |
| 33 | 9.94 | Benzene, 1-methyl-2-propyl- | 0.19 |
| 34 | 10.061 | Heptanoic acid | 0.60 |
| 35 | 10.184 | 1,3,7-Nonatriene-1,1-dicarbonitrile, 4,8-dimethyl-, (E)- | 0.20 |
| 36 | 10.248 | 3-Nonanone | 0.17 |
| 37 | 10.314 | 1-Undecene | 1.54 |
| 38 | 10.451 | Undecane | 0.33 |
| 39 | 10.536 | 2-Undecene, (Z)- | 0.82 |
| 40 | 10.651 | Phenol, 4-(1-methylpropyl)- | 0.30 |
| 41 | 10.684 | 3-Undecene, (Z)- | 0.24 |
| 42 | 10.772 | 3-Carene | 0.14 |
| 43 | 10.86 | 5,6-Undecadiene | 1.00 |
| 44 | 11.003 | 3-Methylenecycloheptene | 0.19 |
| 45 | 11.072 | Benzenemethanol, .alpha.-(1-methylethyl)-, (R)- | 0.36 |
| 46 | 11.144 | 5-Pentylcyclohexa-1,3-diene | 0.19 |
| 47 | 11.276 | 6-Butyl-1,4-cycloheptadiene | 1.05 |
| 48 | 11.419 | 5-Pentylcyclohexa-1,3-diene | 2.47 |
| 49 | 11.505 | Naphthalene, 1,2,3,4-tetrahydro- | 0.12 |
| 50 | 11.558 | Benzene, (1,2-dimethylpropyl)- | 0.35 |
| 51 | 11.767 | (E,E)-1,3,5-Undecatriene | 0.26 |
| 52 | 11.838 | Naphthalene | 0.18 |
| 53 | 11.882 | Cyclododecane | 1.35 |
| 54 | 12.005 | Dodecane | 0.27 |
| 55 | 12.384 | Cyclodecene | 1.58 |
| 56 | 12.483 | 1,3-Cyclohexadiene, 5,6-dimethyl- | 0.12 |
| 57 | 12.538 | Cyclooctene, 3-(1-methylethenyl)- | 0.24 |
| 58 | 12.714 | 1,5-Cyclooctadiene, 3-(1-methyl-2-propenyl)- | 0.14 |
| 59 | 12.816 | Cyclopentane, 1,3-bis(methylene)- | 0.41 |
| 60 | 12.897 | 2,4-Dodecadiene, (E,Z)- | 0.46 |
| 61 | 12.93 | Benzene, hexyl- | 0.73 |
| 62 | 13.04 | Benzene, (1,3-dimethylbutyl)- | 0.23 |
| 63 | 13.263 | Bicyclo[5.1.0]octane | 0.20 |
| 64 | 13.333 | 1-Tridecene | 0.84 |
| 65 | 13.381 | 2-Cyclopenten-1-one, 2-pentyl- | 0.80 |
| 66 | 13.445 | Tridecane | 0.58 |
| 67 | 13.734 | Phenol, 2-butyl- | 0.20 |
| 68 | 13.802 | 1,4-Octadiene | 0.27 |
| 69 | 14.077 | 1,4-Cyclohexadiene | 0.19 |
| 70 | 14.28 | Benzene, 1-heptenyl- | 0.12 |
| 71 | 14.364 | Benzene, heptyl- | 0.41 |
| 72 | 14.441 | Benzene, (1-methylhexyl)- | 0.34 |
| 73 | 14.533 | Bicyclo[2.2.1]heptane, 2-methyl-, exo- | 0.22 |
| 74 | 14.634 | 7-Tetradecene, (E)- | 0.18 |
| 75 | 14.689 | Cyclotetradecane | 2.19 |
| 76 | 14.738 | 2-Dodecanone | 0.11 |
| 77 | 14.791 | Tetradecane | 0.54 |
| 78 | 15.277 | 1,5-Cyclooctadiene, 1-ethyl- | 0.18 |
| 79 | 15.454 | Cyclopentane, nonyl- | 0.21 |
| 80 | 15.533 | 3,4-Octadiene, 7-methyl- | 0.27 |
| 81 | 15.592 | Bicyclo[4.1.0]hept-2-ene | 0.11 |
| 82 | 15.724 | 7-Tridecanone | 0.41 |
| 83 | 15.775 | 9,12-Octadecadienoic acid (Z,Z)- | 0.39 |
| 84 | 15.863 | 1-Hexadecanol | 0.18 |
| 85 | 15.962 | 1-Hexadecanol | 1.49 |
| 86 | 16.055 | Heptadecane | 1.41 |
| 87 | 16.436 | Cyclohexene, 3-(2-methylpropyl)- | 0.11 |
| 88 | 16.731 | Cyclohexane, hexyl- | 0.35 |
| 89 | 16.962 | 17-Octadecynoic acid | 1.55 |
| 90 | 17.167 | 1-Hexadecanol | 1.54 |
| 91 | 17.248 | Eicosane | 0.45 |
| 92 | 17.349 | Benzene, 1,1',1''-[1-(3-methyl-3-butenyl)-1,3,5-pentanetriyl]tris[4-methyl- | 0.15 |
| 93 | 17.576 | Cyclohexane, ethenyl- | 0.17 |
| 94 | 17.821 | Cyclooctene, 4-ethenyl- | 0.19 |
| 95 | 18.006 | Cyclohexene, 1,2-dimethyl- | 0.30 |
| 96 | 18.081 | 1,7-Hexadecadiene | 1.78 |
| 97 | 18.151 | 1-Hexadecanol | 2.47 |
| 98 | 18.213 | 1-Hexadecanol | 0.93 |
| 99 | 18.307 | 1-Nonadecene | 0.69 |
| 100 | 18.384 | Heptacosane | 0.65 |
| 101 | 18.569 | Hexadecanal | 0.47 |
| 102 | 18.66 | Cyclohexene, 1,2-dimethyl- | 0.12 |
| 103 | 18.728 | 5-Tetradecene, (E)- | 0.30 |
| 104 | 19.019 | Bicyclo[5.3.0]decane (cis) | 0.28 |
| 105 | 19.091 | Cyclooctane, ethenyl- | 0.44 |
| 106 | 19.157 | Bicyclo[5.3.0]decane (cis) | 0.62 |
| 107 | 19.217 | Cyclohexene, 1,6-dimethyl- | 0.51 |
| 108 | 19.327 | Benzene, (3-methyl-4-pentenyl)- | 0.24 |
| 109 | 19.389 | 5-Eicosene, (E)- | 0.41 |
| 110 | 19.463 | Heptacosane | 0.19 |
| 111 | 19.659 | Hexadecanal | 1.78 |
| 112 | 20.188 | 1-Methylcycloheptene | 0.18 |
| 113 | 20.252 | 4-Heptanone, 3-methyl- | 0.41 |
| 114 | 20.305 | Z,Z-5,16-Octadecadien-1-ol acetate | 0.25 |
| 115 | 20.362 | Sebacic acid, dodecyl 2-methylbenzyl ester | 0.16 |
| 116 | 20.419 | Bicyclo[2.2.2]octane, 2-methyl- | 0.87 |
| 117 | 20.478 | cis-9-Hexadecenal | 1.53 |
| 118 | 20.529 | 2-Heptadecanone | 5.38 |
| 119 | 20.696 | trans-2-Dodecen-1-ol | 0.12 |
| 120 | 20.752 | Hexadecanoic acid, 15-methyl-, methyl ester | 0.27 |
| 121 | 21.251 | Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-(1.alpha.,2.beta.,5.beta.)]- | 0.16 |
| 122 | 21.417 | 9,12-Octadecadienoic acid (Z,Z)- | 1.12 |
| 123 | 21.467 | 9-Tetradecenal, (Z)- | 2.79 |
| 124 | 21.687 | Pentadecanal- | 0.76 |
| 125 | 22.198 | 9,12-Octadecadienoic acid (Z,Z)- | 2.70 |
| 126 | 22.251 | Z,E-2,13-Octadecadien-1-ol | 5.62 |
| 127 | 22.469 | 2-Nonadecanone | 2.08 |
| 128 | 22.581 | Benzhydrazide, N2-(2-allyloxybenzylideno)- | 0.18 |
| 129 | 23.031 | Bicyclo[2.2.2]octane, 2-methyl- | 0.70 |
| 130 | 23.105 | Cyclohexene, 1,2-dimethyl- | 0.55 |
| 131 | 23.326 | 3-Tetradecanone | 0.49 |
| 132 | 23.638 | Thiophene, 2-dodecyl- | 0.25 |
| 133 | 23.72 | Bicyclo[10.1.0]tridec-1-ene | 0.89 |
| 134 | 23.762 | Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)- | 1.09 |
| 135 | 24.024 | Glutaric acid, isohexyl 5-methoxy-3-methylpentyl ester | 1.40 |
| 136 | 24.151 | Glycidyl palmitate | 0.82 |
| 137 | 24.246 | 2-Pentadecanone, 6,10,14-trimethyl- | 0.21 |
| 138 | 24.356 | Cyclopentanone, 2-(2-octenyl)- | 0.11 |
| 139 | 24.704 | Cyclohexanone, 5-methyl-2-(1-methylethyl)-, (2R-cis)- | 1.08 |
| 140 | 24.852 | 7-Octadecanone | 2.02 |
| 141 | 25.14 | 1,6-Cyclodecadiene | 0.17 |
| 142 | 25.191 | 5-Pyrimidinecarboxaldehyde, 1,2,3,4-tetrahydro-2,4-dioxo- | 0.35 |
| 143 | 25.479 | Cyclohexane, (2,2-dimethylcyclopentyl)- | 0.28 |
| 144 | 25.6 | 5-Tetradecyne | 0.72 |
| 145 | 25.887 | 2-Pentacosanone | 0.27 |
| 146 | 26.166 | 9-Octadecyne | 2.62 |
| 147 | 27.168 | 10-Nonadecanone | 1.39 |
| 148 | 27.895 | Cyclohexanecarboxamide | 1.51 |
| 149 | 31.255 | Benzene, (3-methylcyclopentyl)- | 0.38 |