|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Compound Name | Component RT | Formula | CAS | Relative content/% | | | | | | | | |
| GTMB | XZM-1 | ZZX | NSM | HMC | BPC | XZM-25 | JX | 20-123 |
| Acetaldehyde | 1.26 | C2H4O | 75-07-0 |  |  | 1.81 | 3.41 | 14.09 |  |  |  |  |
| Propanal | 1.39 | C3H6O | 123-38-6 |  | 3.36 |  |  |  |  |  |  |  |
| 2-Butenal | 2.41 | C4H6O | 4170-30-3 |  |  |  | 0.19 |  |  |  |  |  |
| (E)-2-Pentenal | 4.34 | C5H8O | 1576-87-0 |  | 0.36 | 0.12 |  |  |  |  |  |  |
| 3-methyl-2-Butenal | 4.38 | C5H8O | 107-86-8 |  |  | 0.12 |  |  |  |  |  |  |
| 3-methyl-Pentanal | 5.74 | C6H12O | 15877-57-3 |  |  | 0.17 |  |  |  |  |  |  |
| Hexanal | 5.79 | C6H12O | 66-25-1 |  |  |  | 0.10 | 0.21 |  |  |  |  |
| (E)-2-Hexenal | 7.65 | C6H10O | 6728-26-3 |  | 0.36 | 0.21 |  |  | 0.55 |  |  |  |
| 2-Hexenal | 7.90 | C6H10O | 505-57-7 |  |  |  |  |  |  | 0.51 |  |  |
| (Z)-2-Heptenal | 11.36 | C7H12O | 57266-86-1 |  |  | 0.14 |  |  |  |  |  |  |
| Benzaldehyde | 11.66 | C7H6O | 100-52-7 |  | 3.21 | 2.07 | 0.29 | 1.38 | 5.91 | 2.61 |  | 2.87 |
| Octanal | 13.11 | C8H16O | 124-13-0 | 0.55 | 26.67 | 4.28 | 12.07 | 11.33 | 17.00 | 27.60 | 11.95 | 23.93 |
| 2,5-Furandicarboxaldehyde | 16.00 | C6H4O3 | 823-82-5 | 0.32 |  |  |  |  |  |  | 0.61 |  |
| Pentanal | 16.24 | C5H10O | 110-62-3 |  |  |  |  |  |  |  | 1.53 |  |
| (E,Z)-2,6-Nonadienal | 18.00 | C9H14O | 557-48-2 | 1.43 | 2.91 | 4.89 |  | 2.15 |  |  |  | 10.59 |
| (E,E)-2,6-Nonadienal | 18.21 | C9H14O | 17587-33-6 |  |  |  |  | 2.15 | 6.21 |  |  |  |
| 3-ethyl-Benzaldehyde | 18.28 | C9H10O | 34246-54-3 |  |  |  |  |  |  |  | 0.15 | 0.18 |
| (E)-2-Nonenal | 18.66 | C9H16O | 18829-56-6 |  | 10.21 |  |  |  | 0.95 |  | 0.61 | 1.62 |
| 2-methyl-Propanal | 19.04 | C4H8O | 78-84-2 |  |  |  | 20.25 |  |  |  |  |  |
| Decanal | 20.01 | C10H20O | 112-31-2 |  |  |  | 0.97 | 2.04 | 0.26 | 0.40 | 0.23 | 0.44 |
| 5-Acetoxymethyl-2-furaldehyde | 20.22 | C8H8O4 | 10551-58-3 | 15.89 |  |  |  |  |  |  |  |  |
| Dodecanal | 24.35 | C12H24O | 112-54-9 | 0.26 |  |  |  |  |  |  |  |  |
| Hexadecanal | 34.57 | C16H32O | 629-80-1 | 0.19 |  |  |  |  |  |  |  |  |

Table S2 Volatile component of aldehydes in 9 varieties of muskmelon