|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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