**Table S1.** Sample information.

|  |  |  |  |
| --- | --- | --- | --- |
| Sample | Variety | stage | origin |
| C0 | CX14 | Raw materiel | Shiyan |
| C1 | CX14 | pre-fermentation | Shiyan |
| C2 | CX14 | mid-fermentation | Shiyan |
| C3 | CX14 | post-fermentation | Shiyan |
| C4 | CX14 | end of fermentation | Shiyan |
| D0 | DX4 | Raw materiel | Deyang |
| D1 | DX4 | pre-fermentation | Deyang |
| D2 | DX4 | mid-fermentation | Deyang |
| D3 | DX4 | post-fermentation | Deyang |
| D4 | DX4 | end of fermentation | Deyang |
| R0 | CRIOLLO 98 | Raw materiel | Dominica |
| R1 | CRIOLLO 98 | pre-fermentation | Dominica |
| R2 | CRIOLLO 98 | mid-fermentation | Dominica |
| R3 | CRIOLLO 98 | post-fermentation | Dominica |
| R4 | CRIOLLO 98 | end of fermentation | Dominica |
| N0 | N-Jalap HABANA | Raw materiel | Dominica |
| N1 | N-Jalap HABANA | pre-fermentation | Dominica |
| N2 | N-Jalap HABANA | mid-fermentation | Dominica |
| N3 | N-Jalap HABANA | post-fermentation | Dominica |
| N4 | N-Jalap HABANA | end of fermentation | Dominica |
| H0 | HVA | Raw materiel | Dominica |
| H1 | HVA | pre-fermentation | Dominica |
| H2 | HVA | mid-fermentation | Dominica |
| H3 | HVA | post-fermentation | Dominica |
| H4 | HVA | end of fermentation | Dominica |
| B0 | BESUKI | Raw materiel | Indonesia |
| B1 | BESUKI | pre-fermentation | Indonesia |
| B2 | BESUKI | mid-fermentation | Indonesia |
| B3 | BESUKI | post-fermentation | Indonesia |
| B4 | BESUKI | end of fermentation | Indonesia |
| M0 | MATA FINA | Raw materiel | Ecuador |
| M1 | MATA FINA | pre-fermentation | Ecuador |
| M2 | MATA FINA | mid-fermentation | Ecuador |
| M3 | MATA FINA | post-fermentation | Ecuador |
| M4 | MATA FINA | end of fermentation | Ecuador |
| E0 | E-HABANO 2000 | Raw materiel | Brazil |
| E1 | E-HABANO 2000 | pre-fermentation | Brazil |
| E2 | E-HABANO 2000 | mid-fermentation | Brazil |
| E3 | E-HABANO 2000 | post-fermentation | Brazil |
| E4 | E-HABANO 2000 | end of fermentation | Brazil |

**Table S2.** VIP value of characteristic volatiles at the end of fermentation

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic volatiles | VIP value | Characteristic volatiles | VIP value |
| Myosmine | 1.57405 | Benzoic acid, 2-methoxy-, methyl ester | 1.18162 |
| 1,4-Cyclohexanedione, 2,2,6-trimethyl | 1.45416 | 1,2-Benzenedicarboxylic acid, dibutyl ester | 1.15964 |
| Acetaldehyde | 1.3772 | 4-Oxoisophorone | 1.15846 |
| Nonanal | 1.3114 | Ethanone, 1-(1-cyclohexen-1-yl)- | 1.12645 |
| 9H-Fluorene  | 1.28166 | 1,2-Benzenedicarboxylic acid, dimethyl ester | 1.10581 |
| Nicotyrine | 1.28049 | Dihydrooxo isophorone | 1.08895 |
| Pyrazine, tetramethyl- | 1.26478 | Farnesyl Acetone C | 1.07567 |
| 1-Dodecanol, 3,7,11-trimethyl- | 1.25785 | 2-Undecanone, 6,10-dimethyl- | 1.06718 |
| 2,6,6-Trimethyl-2-cyclohexenone | 1.25185 | Pentanoic acid, 3-methyl- | 1.05227 |
| Dihydro-beta-ionone | 1.23125 | Butanoic acid | 1.05106 |
| Acetic Acid | 1.20595 | Geranyl acetone | 1.04046 |
| Ethanone, 1-(2-pyridinyl)- | 1.20081 | Megastigmatrienone 4 | 1.03334 |
| Phytol | 1.19823 | α-Copaene | 1.00776 |
| Crotonic acid, 2-methyl- | 1.19381 | Ethanone, 1-(2-furanyl)- | 1.00584 |
| Propanoic acid, 2-methyl- | 1.02257 | α-Curcumene | 1.00367 |
| Bourgeonal | 1.008 | Isophorone | 1.0079 |