

Table S1. Results of the descriptive analysis.

| Attributes | R1 | R2 | R3 | R4 | R5 | R6 | R12 | R13 | R14 | R15 | R16 | R17 | R18 | R19 | R28 | R29 | R30 | R31 | LSD | F |
|-------------------|------|------|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| colour | 13.3 | 11.3 | 13.6 | 9.6 | 9.2 | 12.6 | 8.3 | 9.5 | 8.3 | 7.8 | 8.2 | 7.5 | 7.6 | 7.0 | 7.6 | 4.6 | 5.2 | 7.8 | 1.4 | *** |
| pale-yellow | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 | 8.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | *** |
| V-coating | 12.5 | 9.6 | 12.9 | 8.1 | 7.8 | 11.6 | 7.0 | 8.8 | 6.8 | 7.7 | 6.9 | 6.2 | 7.9 | 5.8 | 6.1 | 3.8 | 4.5 | 6.4 | 1.3 | *** |
| N-alcohol | 4.6 | 5.4 | 5.2 | 6.0 | 5.4 | 5.1 | 5.6 | 5.6 | 5.7 | 5.3 | 5.3 | 4.8 | 5.3 | 4.8 | 5.5 | 5.1 | 5.2 | 4.7 | 1.1 | ns |
| N-suma | 5.0 | 3.9 | 4.8 | 4.5 | 3.9 | 5.5 | 3.2 | 4.0 | 4.2 | 4.9 | 4.4 | 4.2 | 4.2 | 3.2 | 4.0 | 2.6 | 2.6 | 4.0 | 1.2 | *** |
| N-head&tale | 2.3 | 2.8 | 2.2 | 2.6 | 2.5 | 1.6 | 4.4 | 3.4 | 3.9 | 3.4 | 3.5 | 3.2 | 3.2 | 3.6 | 3.8 | 4.5 | 5.4 | 3.3 | 1.2 | *** |
| N-damp-dry hay | 1.6 | 2.5 | 1.9 | 2.2 | 2.7 | 1.4 | 4.4 | 3.2 | 3.8 | 3.6 | 3.3 | 2.7 | 2.9 | 2.8 | 3.1 | 4.2 | 3.7 | 2.8 | 1.1 | *** |
| N-fresh grape | 4.0 | 3.8 | 5.0 | 4.7 | 4.1 | 4.7 | 3.4 | 3.5 | 4.4 | 5.9 | 4.7 | 4.0 | 4.9 | 3.6 | 3.4 | 2.8 | 2.4 | 3.5 | 1.2 | *** |
| N-green apple | 1.8 | 1.5 | 2.5 | 2.1 | 2.0 | 2.2 | 1.5 | 1.4 | 1.7 | 2.2 | 1.8 | 1.9 | 1.8 | 1.4 | 1.4 | 1.0 | 1.1 | 1.5 | 0.9 | ns |
| N-fruity | 4.2 | 4.5 | 4.5 | 4.5 | 4.7 | 4.8 | 3.6 | 3.6 | 4.2 | 4.7 | 4.5 | 4.3 | 4.2 | 3.5 | 3.2 | 2.4 | 3.2 | 4.4 | 1.2 | ** |
| N-raisin | 5.0 | 4.1 | 2.9 | 3.1 | 3.8 | 3.5 | 3.8 | 3.8 | 3.6 | 2.0 | 2.8 | 2.7 | 2.0 | 2.2 | 2.6 | 2.7 | 2.6 | 3.0 | 1.3 | ** |
| N-dry Fruit | 4.4 | 3.8 | 3.0 | 3.0 | 3.6 | 3.4 | 3.3 | 3.6 | 3.5 | 2.7 | 2.9 | 2.8 | 2.5 | 2.5 | 2.7 | 3.1 | 2.5 | 3.2 | 1.2 | ns |
| N-flowery | 4.3 | 3.6 | 4.2 | 4.6 | 3.5 | 4.4 | 3.0 | 3.4 | 3.2 | 4.1 | 4.1 | 3.8 | 4.6 | 3.5 | 3.2 | 3.0 | 2.2 | 3.6 | 1.3 | * |
| N-dry flower | 4.2 | 4.3 | 4.3 | 3.6 | 2.9 | 3.9 | 3.6 | 3.6 | 3.8 | 3.2 | 3.5 | 3.0 | 2.9 | 2.7 | 3.0 | 3.0 | 2.4 | 2.7 | 1.2 | * |
| N-sweet | 9.9 | 8.7 | 10.2 | 9.1 | 8.2 | 9.9 | 8.1 | 8.6 | 7.8 | 9.1 | 8.3 | 7.7 | 8.8 | 7.7 | 7.8 | 6.2 | 6.8 | 7.8 | 1.1 | *** |
| N-menthol | 2.7 | 2.8 | 3.3 | 3.0 | 2.2 | 3.0 | 2.2 | 2.5 | 2.2 | 2.9 | 2.0 | 2.2 | 2.5 | 1.7 | 1.5 | 1.6 | 1.6 | 1.9 | 1.1 | * |
| N-spicy | 5.6 | 5.7 | 5.7 | 5.2 | 5.7 | 6.2 | 6.0 | 5.6 | 5.7 | 5.8 | 5.1 | 5.3 | 6.1 | 4.7 | 4.4 | 4.4 | 4.4 | 5.0 | 1.1 | * |
| N-aniseed | 10.7 | 9.5 | 10.8 | 8.9 | 8.9 | 9.7 | 7.8 | 9.5 | 8.2 | 9.2 | 8.5 | 8.4 | 8.5 | 8.0 | 7.5 | 7.1 | 6.6 | 8.2 | 1.1 | *** |
| N-roasted aniseed | 0.9 | 0.9 | 0.6 | 0.7 | 0.7 | 2.3 | 0.7 | 0.5 | 1.0 | 0.9 | 0.7 | 0.6 | 0.7 | 0.4 | 1.3 | 0.5 | 0.4 | 0.6 | 1.1 | ns |
| N-boiled aniseed | 2.2 | 2.8 | 1.9 | 2.3 | 2.4 | 2.1 | 5.0 | 3.5 | 3.4 | 2.9 | 3.2 | 2.5 | 2.3 | 2.9 | 3.7 | 3.4 | 3.3 | 2.2 | 1.1 | *** |
| N-mastic | 6.1 | 4.1 | 4.8 | 2.3 | 1.9 | 4.7 | 2.2 | 2.0 | 1.7 | 2.7 | 2.2 | 1.8 | 1.8 | 1.3 | 0.7 | 1.1 | 1.3 | 1.6 | *** | |
| N-black pepper | 2.4 | 2.7 | 3.0 | 2.1 | 2.6 | 3.0 | 2.6 | 2.6 | 2.1 | 2.6 | 2.2 | 2.6 | 2.9 | 1.8 | 2.2 | 1.9 | 1.7 | 1.8 | 1.1 | ns |
| N-clove | 1.7 | 1.8 | 2.1 | 1.5 | 1.9 | 1.9 | 1.6 | 1.6 | 1.8 | 1.5 | 1.5 | 1.7 | 1.9 | 1.3 | 1.3 | 1.5 | 1.1 | 1.4 | 0.7 | ns |
| N-liquorice | 3.9 | 2.8 | 3.6 | 2.6 | 3.2 | 3.0 | 2.9 | 3.2 | 3.2 | 3.0 | 2.8 | 2.8 | 2.8 | 2.3 | 2.6 | 2.0 | 1.8 | 2.4 | 0.9 | ** |
| N-fennel | 5.2 | 4.9 | 5.0 | 4.8 | 4.4 | 5.3 | 4.8 | 4.4 | 4.9 | 5.0 | 4.5 | 4.5 | 4.0 | 3.6 | 4.0 | 2.9 | 3.2 | 3.9 | 1.1 | *** |
| N-bitter almond | 0.8 | 0.8 | 1.3 | 0.6 | 0.5 | 0.5 | 0.7 | 0.6 | 0.8 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.6 | 0.3 | 0.3 | 0.4 | 0.5 | ns |
| N-fresh-resin | 4.3 | 4.1 | 5.2 | 4.3 | 3.7 | 5.0 | 3.1 | 3.4 | 3.5 | 5.8 | 4.0 | 3.4 | 5.3 | 3.7 | 3.1 | 3.3 | 3.4 | 4.0 | 1.1 | *** |
| N-nutty | 2.1 | 2.0 | 1.7 | 1.8 | 1.5 | 1.9 | 1.7 | 1.7 | 2.0 | 2.1 | 1.8 | 1.8 | 1.7 | 1.5 | 1.5 | 1.7 | 1.4 | 1.4 | 0.7 | ns |
| N-woody | 0.8 | 0.7 | 0.9 | 0.8 | 0.6 | 0.7 | 0.5 | 0.5 | 0.8 | 5.6 | 0.6 | 0.8 | 5.1 | 0.5 | 0.5 | 0.5 | 0.4 | 0.6 | 1.0 | *** |
| P-suma | 4.5 | 3.9 | 4.8 | 4.3 | 3.6 | 4.8 | 3.1 | 3.7 | 4.4 | 4.2 | 4.4 | 4.0 | 4.2 | 2.6 | 3.1 | 2.6 | 2.4 | 3.1 | 1.0 | *** |
| P-head&tail | 1.9 | 2.1 | 2.1 | 3.3 | 2.0 | 2.0 | 4.3 | 3.2 | 3.9 | 2.6 | 3.2 | 2.7 | 2.2 | 3.4 | 3.3 | 4.0 | 4.6 | 3.0 | 1.2 | *** |
| P-damp-dry hay | 1.7 | 1.7 | 1.7 | 2.4 | 1.9 | 2.0 | 4.1 | 3.2 | 3.2 | 2.3 | 2.5 | 2.3 | 2.2 | 2.5 | 3.0 | 3.1 | 2.9 | 2.2 | 1.0 | *** |
| P-fresh grape | 3.2 | 4.0 | 4.7 | 4.1 | 3.6 | 4.0 | 3.1 | 3.8 | 3.9 | 5.5 | 4.1 | 4.0 | 4.8 | 3.0 | 3.2 | 2.6 | 2.3 | 3.2 | 1.2 | *** |
| P-green apple | 1.6 | 1.6 | 2.2 | 1.8 | 1.3 | 1.5 | 1.0 | 1.4 | 1.6 | 1.3 | 1.9 | 1.7 | 1.3 | 0.9 | 1.3 | 0.9 | 1.0 | 1.2 | 0.8 | ns |
| P-fruity | 4.2 | 4.0 | 4.4 | 4.7 | 3.9 | 4.0 | 3.1 | 3.8 | 3.8 | 4.6 | 4.5 | 4.4 | 3.9 | 3.0 | 3.0 | 2.6 | 2.8 | 3.6 | 1.0 | *** |
| P-raisin | 5.3 | 3.9 | 2.8 | 3.1 | 3.3 | 3.3 | 3.2 | 3.3 | 3.2 | 2.2 | 2.2 | 2.4 | 1.7 | 1.9 | 2.7 | 2.6 | 1.7 | 2.4 | 1.1 | *** |
| P-dry Fruit | 4.2 | 3.8 | 2.6 | 2.6 | 3.3 | 2.7 | 3.0 | 3.0 | 3.2 | 2.4 | 2.5 | 2.3 | 2.2 | 1.9 | 2.5 | 2.5 | 1.9 | 2.5 | 1.1 | ** |
| P-flowery | 3.4 | 3.1 | 4.1 | 3.8 | 2.4 | 3.8 | 2.5 | 3.5 | 2.3 | 3.3 | 3.5 | 3.3 | 3.5 | 2.3 | 2.0 | 2.2 | 1.6 | 2.9 | 1.2 | ** |
| P-dry flower | 3.8 | 3.6 | 3.2 | 2.3 | 2.7 | 3.5 | 2.6 | 3.4 | 3.0 | 2.9 | 3.0 | 2.1 | 2.6 | 1.8 | 2.9 | 2.1 | 1.8 | 2.3 | 1.1 | ** |
| P-sweet | 9.2 | 9.0 | 9.6 | 7.8 | 7.8 | 8.7 | 7.0 | 8.4 | 7.8 | 8.6 | 8.5 | 7.7 | 7.9 | 6.3 | 6.4 | 6.0 | 6.1 | 7.1 | 1.1 | *** |
| P-menthol | 2.6 | 2.6 | 2.8 | 2.6 | 2.0 | 3.1 | 2.2 | 2.7 | 2.0 | 2.6 | 2.1 | 1.9 | 2.2 | 1.5 | 1.7 | 1.5 | 1.6 | 2.0 | 1.1 | * |
| P-spicy | 6.0 | 5.6 | 5.4 | 5.3 | 5.0 | 6.3 | 5.8 | 5.4 | 4.9 | 6.1 | 5.3 | 5.1 | 5.9 | 4.0 | 4.4 | 3.9 | 3.6 | 4.4 | 1.2 | *** |
| P-aniseed | 10.2 | 9.0 | 10.1 | 7.9 | 8.5 | 9.2 | 7.8 | 8.2 | 7.9 | 8.8 | 8.2 | 7.6 | 7.7 | 6.6 | 6.4 | 6.0 | 6.0 | 7.2 | 1.1 | *** |
| P-roasted aniseed | 1.3 | 1.3 | 0.8 | 0.7 | 0.8 | 2.4 | 0.8 | 0.7 | 1.4 | 0.7 | 0.9 | 0.2 | 0.8 | 0.5 | 1.0 | 0.5 | 0.6 | 0.8 | 0.9 | ** |

| | | | | | | | | | | | | | | | | | | | | |
|------------------|------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| P-boiled aniseed | 1.8 | 1.8 | 1.8 | 1.9 | 2.0 | 1.4 | 4.0 | 2.9 | 3.4 | 2.7 | 2.9 | 2.3 | 2.0 | 2.7 | 2.5 | 3.2 | 2.9 | 2.5 | 1.0 | *** |
| P-mastic | 4.8 | 2.6 | 3.0 | 1.5 | 0.9 | 3.1 | 1.0 | 1.3 | 1.3 | 1.6 | 1.3 | 1.2 | 1.7 | 0.9 | 1.2 | 0.6 | 0.5 | 1.0 | 1.2 | *** |
| P-black pepper | 2.3 | 3.2 | 2.1 | 2.5 | 2.2 | 3.4 | 2.7 | 2.3 | 1.9 | 2.3 | 1.9 | 2.2 | 3.0 | 1.4 | 2.3 | 2.4 | 1.4 | 1.8 | 1.1 | ** |
| P-clove | 1.6 | 1.7 | 1.7 | 1.3 | 1.4 | 1.8 | 1.6 | 1.4 | 1.9 | 1.8 | 1.4 | 1.2 | 1.5 | 0.8 | 1.4 | 1.4 | 0.9 | 1.4 | 0.7 | ns |
| P-liquorice | 3.1 | 3.4 | 2.9 | 2.4 | 2.5 | 3.0 | 2.2 | 2.9 | 2.6 | 2.9 | 2.6 | 2.8 | 2.5 | 1.9 | 1.9 | 1.5 | 1.2 | 2.0 | 0.9 | *** |
| P-fennel | 4.5 | 4.3 | 4.5 | 4.0 | 3.9 | 4.1 | 3.9 | 4.3 | 3.9 | 4.3 | 3.8 | 3.9 | 4.0 | 3.1 | 3.3 | 2.7 | 2.4 | 3.3 | 1.0 | *** |
| P-bitter almond | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.2 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 | 0.4 | 0.6 | 0.3 | 0.5 | 0.3 | 0.2 | 0.3 | 0.5 | ** |
| P-fresh-resin | 4.1 | 3.9 | 3.5 | 3.4 | 3.6 | 4.1 | 3.0 | 2.7 | 3.4 | 5.1 | 3.0 | 3.2 | 4.8 | 2.7 | 2.8 | 2.7 | 2.7 | 3.5 | 1.0 | *** |
| P-nutty | 1.9 | 2.5 | 1.6 | 1.4 | 1.7 | 1.6 | 1.7 | 1.6 | 1.7 | 2.2 | 1.9 | 1.5 | 1.8 | 1.2 | 1.5 | 1.1 | 1.2 | 1.2 | 0.7 | ** |
| P-woody | 0.8 | 0.9 | 0.8 | 0.6 | 0.6 | 0.7 | 0.9 | 0.5 | 0.7 | 5.1 | 0.8 | 0.7 | 5.0 | 0.5 | 0.8 | 0.9 | 0.5 | 0.7 | 1.1 | *** |
| tingling-numbing | 4.7 | 4.6 | 4.5 | 6.8 | 4.4 | 4.5 | 4.7 | 5.1 | 5.1 | 4.4 | 4.9 | 4.4 | 5.0 | 3.7 | 5.9 | 5.0 | 5.1 | 4.1 | 1.5 | * |
| body | 10.2 | 8.8 | 10.1 | 7.8 | 7.0 | 9.9 | 6.8 | 7.5 | 7.4 | 8.4 | 7.1 | 6.0 | 8.1 | 5.5 | 6.1 | 4.3 | 4.4 | 6.2 | 1.3 | *** |
| burning | 6.3 | 5.5 | 6.0 | 7.7 | 5.7 | 5.1 | 5.3 | 6.2 | 6.5 | 5.2 | 5.6 | 5.6 | 5.5 | 4.6 | 6.4 | 5.3 | 5.1 | 5.1 | 1.5 | ns |
| coating/creamy | 8.5 | 6.7 | 8.6 | 6.3 | 5.7 | 7.7 | 5.8 | 5.7 | 5.5 | 6.9 | 5.6 | 4.9 | 6.5 | 4.5 | 4.9 | 3.9 | 4.2 | 4.9 | 1.2 | *** |
| throat burning | 6.2 | 6.3 | 6.0 | 7.3 | 6.6 | 5.6 | 6.2 | 6.4 | 6.7 | 6.0 | 5.9 | 6.0 | 5.2 | 5.2 | 6.1 | 5.1 | 4.6 | 5.3 | 1.5 | ns |
| persistency | 11.2 | 9.6 | 10.8 | 9.7 | 8.5 | 10.3 | 8.0 | 9.1 | 8.8 | 9.3 | 8.1 | 7.6 | 9.3 | 5.9 | 7.2 | 5.5 | 5.0 | 7.1 | 1.2 | *** |
| bitterness | 1.8 | 1.9 | 1.9 | 1.2 | 2.0 | 2.4 | 2.2 | 2.4 | 3.1 | 2.0 | 2.2 | 2.1 | 2.2 | 1.6 | 2.5 | 3.2 | 3.2 | 2.0 | 1.1 | * |
| sweetness | 7.8 | 7.6 | 8.5 | 7.2 | 7.2 | 7.9 | 7.4 | 6.5 | 7.1 | 7.6 | 7.3 | 6.7 | 7.6 | 6.3 | 6.4 | 6.2 | 6.2 | 6.9 | 1.1 | ** |

F: Significance at which means differ as shown as analysis of variance, *p < 0.05 level, **p < 0.01 level, ***p < 0.001 level; ns: not significant; LSD: Least Significant Differences is calculated at 95% confidence level with the interaction as the error terms. If the difference between the means in the same row is greater than the LSD value, the difference is statistically significant. N; Aroma on the nose and P; Aroma in the mouth (retronasal)