

Article

Identification of the Volatile Compounds and Sensory Attributes of Long-Term Aging Vin Santo Wine from Malvasia di Candia Aromatic Grapes

Monica Laureati ¹, Camilla Cattaneo ^{1*}, Fernando Tateo ² and Monica Bononi ²

¹ Department of Food, Environmental and Nutritional Sciences (DeFENS), University of Milan, Via Celoria 2, 20133, Milan, Italy; monica.laureati@unimi.it (M.L.); camilla.cattaneo@unimi.it (C.C.)

² Department of Agricultural and Environmental Sciences (Di.S.A.A), University of Milan, Via Celoria 2, 20133, Milan, Italy; fernando.tateo@unimi.it (F.T.); monica.bononi@unimi.it (M.B.)

* Correspondence: camilla.cattaneo@unimi.it (C.C.) Tel.: +39-0250319171

Supplementary Table S1. VIP coefficients of the models corresponding to each dependent variable

| Variable | Solvent odor | Honey odor | Caramel odor | Rum odor | Dried fig odor | Baked apple odor | Nutty odor | Solvent flavor | Honey flavor | Caramel flavor | Rum flavor | Dried fig flavor | Baked apple flavor | Nutty flavor |
|--------------------------------|--------------|------------|--------------|----------|----------------|------------------|------------|----------------|--------------|----------------|------------|------------------|--------------------|--------------|
| ethyl acetate | 1,659 | 0,927 | -0,97 | -0,286 | -0,847 | -5,165 | -1,54 | 4,495 | 4,932 | -3,698 | -2,613 | 1,051 | 8,126 | 0,731 |
| ethyl propionate | -0,233 | -0,159 | 0,13 | 0,098 | 0,077 | 0,805 | 0,187 | -0,459 | -0,847 | 0,623 | 0,468 | -0,395 | -1,252 | -0,625 |
| 2,4,5-trimethyl-1,3-dioxolane | 2,097 | 1,536 | -1,06 | -0,948 | -0,505 | -7,707 | -1,833 | 4,865 | 8,151 | -5,848 | -4,478 | 2,584 | 11,499 | 0,93 |
| amyl alcohol + isoamyl alcohol | 4,721 | 1,978 | -3,006 | -0,432 | -1,436 | -12,027 | -5,097 | 10,489 | 14,698 | -19,427 | -7,258 | 3,355 | 19,78 | -7,741 |
| ethyl isobutyrate | -0,311 | -1,064 | -0,217 | 1,352 | -0,841 | 3,964 | -0,075 | 0,369 | -4,817 | 1,439 | 2,986 | -2,684 | -4,739 | -1,767 |
| 2,3 butanediol | 0,247 | 0,644 | 0,093 | -0,769 | 0,463 | -2,49 | -0,057 | 0,112 | 2,978 | -1,05 | -1,812 | 1,371 | 3,011 | 0,175 |
| ethyl butyrate | 0,132 | 0,032 | -0,089 | 0,066 | -0,149 | -0,296 | -0,154 | 0,618 | 0,126 | -0,036 | -0,042 | -0,265 | 0,499 | -0,469 |
| ethyl 2-methyl butyrate | -0,013 | -0,383 | -0,168 | 0,523 | -0,385 | 1,331 | -0,125 | 0,272 | -1,605 | 0,139 | 1,029 | -0,822 | -1,422 | -0,195 |
| ethyl isovalerate | -0,495 | -1,219 | -0,148 | 1,446 | -0,844 | 4,731 | 0,124 | -0,225 | -5,65 | 2,045 | 3,435 | -2,677 | -5,781 | -0,698 |
| 1-hexanol | 0,834 | 0,149 | -0,635 | 0,267 | -0,681 | -1,485 | -0,904 | 2,354 | 1,314 | -2,179 | -0,538 | -0,028 | 2,899 | -0,052 |
| isoamyl acetate | 1,824 | 0,342 | -1,39 | 0,669 | -1,78 | -3,382 | -1,895 | 5,718 | 2,304 | -3,086 | -0,918 | -0,437 | 6,567 | 1,381 |
| limetol | 8,968 | 0,831 | -7,245 | 4,2 | -9,02 | -13,465 | -9,69 | 27,095 | 9,097 | -18,455 | -2,885 | -2,455 | 28,91 | 5,734 |
| ethyl hexanoate | 11,644 | -0,702 | -10,226 | 7,756 | -13,073 | -11,236 | -13,359 | 35,729 | 5,403 | -26,152 | 0,557 | -6,429 | 30,817 | 4,011 |
| linalool oxide | 0,512 | 0,134 | -0,382 | 0,069 | -0,34 | -1,019 | -0,511 | 1,126 | 1,072 | -1,592 | -0,499 | 0,412 | 1,935 | 0,792 |
| nonanal | 0,346 | 0,028 | -0,289 | 0,139 | -0,317 | -0,477 | -0,36 | 0,837 | 0,42 | -0,942 | -0,15 | 0,138 | 1,096 | 0,694 |
| phenylethyl alcohol | 5,362 | 0,982 | -4,089 | 1,62 | -4,262 | -9,553 | -5,772 | 14,6 | 8,761 | -14,629 | -3,643 | 0,44 | 18,699 | 0,708 |
| diethyl succinate | 10,939 | 5,647 | -6,72 | -1,386 | -6,226 | -32,252 | -9,972 | 28,48 | 30,394 | -23,805 | -16,002 | 8,151 | 52,149 | 13,488 |
| alpha terpineol | 0,908 | 0,837 | -0,375 | -0,64 | -0,049 | -3,94 | -0,738 | 2,039 | 4,223 | -2,515 | -2,387 | 1,407 | 5,603 | 0,297 |
| octanoic acid | -0,811 | 0,553 | 0,949 | -1,299 | 1,587 | -0,903 | 1,087 | -3,252 | 2,045 | 0,827 | -1,548 | 1,829 | -0,398 | -0,466 |
| ethyl octanoate | 58,106 | -31,793 | -64,242 | 81,759 | -104,227 | 38,039 | -75,353 | 224,299 | -111,21 | -68,431 | 88,578 | -112,496 | 56,163 | 30,74 |
| beta phenylethyl acetate | 0,722 | 0,188 | -0,525 | 0,21 | -0,692 | -1,537 | -0,726 | 2,336 | 1,042 | -0,993 | -0,46 | -0,161 | 2,812 | 0,628 |
| alpha ionone | 0,33 | -0,018 | -0,286 | 0,23 | -0,389 | -0,337 | -0,381 | 1,102 | 0,113 | -0,613 | 0,037 | -0,275 | 0,886 | -0,013 |
| butyl octanoate | -0,648 | -0,334 | 0,407 | 0,099 | 0,368 | 1,891 | 0,566 | -1,534 | -1,816 | 1,453 | 0,964 | -0,685 | -3,103 | -1,461 |
| ethyl decanoate | 22,522 | -3,684 | -20,897 | 18,974 | -29,74 | -14,326 | -26,241 | 75,282 | -3,503 | -38,58 | 9,359 | -20,742 | 52,264 | 14,617 |
| isoamyl octanoate | -0,029 | -0,016 | 0,02 | 0,011 | 0,014 | 0,082 | 0,018 | -0,023 | -0,09 | 0,08 | 0,051 | -0,09 | -0,145 | -0,248 |
| ethyl dodecanoate | 0,379 | -0,15 | -0,41 | 0,345 | -0,427 | 0,153 | -0,455 | 0,663 | -0,053 | -1,627 | 0,196 | 0,163 | 0,505 | 0,996 |