



Supplementary data

Table S1. Citric and acetic acid analyzed after MLF. Control corresponds to the control fermentation; TdP and TdV corresponds to the fermentations with *T. delbrueckii* Prelude or *T. delbrueckii* Viniferm, respectively. Oo-VP41, OoCH11 and Spontaneous correspond to MLF performed with the strain Vp41, the strain CH11 and endogenous LAB. Different lowercase letters indicate the existence of significant difference between samples at the end of CM ($p < 0.05$). Different uppercase letters indicate the existence of significant difference between samples at the end of AF (p -value < 0.05). All data is expressed as the arithmetic average of three biological samples.

MLF condition	AF condition	Citric acid	Acetic acid
OoVP41	Control	0.25 ± 0.02	0.50 ± 0.08
	TdP	0.20 ± 0.03	0.51 ± 0.04
	TdV	0.22 ± 0.04	0.38 ± 0.07
OoCH11	Control	0.23 ± 0.03	0.54 ± 0.12
	TdP	0.26 ± 0.03	0.39 ± 0.06
	TdV	0.24 ± 0.06	0.37 ± 0.08
Spontaneous	Control	0.21 ± 0.02	0.63 ± 0.02
	TdP	0.19 ± 0.01	0.57 ± 0.03
	TdV	0.20 ± 0.03	0.48 ± 0.07

Table S2. Total volatile compounds analyzed (mg/L). End of CM corresponds to the sampling after carbonic maceration, before to inoculate *S. cerevisiae*, and End of AF corresponds to the sampling after alcoholic fermentation. Control corresponds to the control fermentation; TdP and TdV corresponds to the fermentations with *T. delbrueckii* Prelude or *T. delbrueckii* Viniferm, respectively. All data is expressed as the arithmetic average of three biological replicates.

	End of CM			End of AF		
	CM Control	CM TdP	CM TdV	AF Control	AF P	AF V
Isobutyl acetate	5.01 ± 0.39	4.64 ± 0.76	4.26 ± 0.58	3.83 ± 0.81	2.79 ± 0.30	2.53 ± 0.87
Isoamyl acetate	0.62 ± 0.12	0.63 ± 0.12	0.47 ± 0.06	0.57 ± 0.09	3.37 ± 0.11	1.32 ± 0.12
2-fenylethanol acetate	0.02 ± 0.04	0.33 ± 0.19	0.21 ± 0.14	0.09 ± 0.03	0.27 ± 0.04	0.63 ± 0.23
Σ Fusel alcohols acetates	5.65 ± 0.45	5.61 ± 0.78	4.94 ± 0.78	4.50 ± 0.87	6.43 ± 0.22	4.49 ± 1.16
Ethyl butanoate	0.28 ± 0.02	1.02 ± 0.19	0.63 ± 0.24	0.47 ± 0.19	0.47 ± 0.08	0.53 ± 0.03
Ethyl hexanoate	0.95 ± 0.26	1.38 ± 0.17	0.89 ± 0.14	0.95 ± 0.20	0.87 ± 0.06	n.d
Ethyl octanoate	3.53 ± 0.01	3.62 ± 0.61	3.21 ± 0.58	2.72 ± 1.16	2.21 ± 0.45	1.85 ± 0.29
Ethyl decanoate	0.30 ± 0.01	0.29 ± 0.13	0.14 ± 0.04	0.58 ± 0.23	1.32 ± 0.08	1.51 ± 0.39
Diethyl butanedioate	n.d	n.d	n.d	0.73 ± 0.03	1.60 ± 0.27	0.50 ± 0.01
Ethyl dodecanoate	0.17 ± 0.04	0.66 ± 0.08	0.29 ± 0.03	1.24 ± 0.27	5.11 ± 0.40	4.32 ± 0.44
Σ Ethyl esters de FA	5.23 ± 0.28	6.97 ± 0.66	5.15 ± 0.30	6.68 ± 0.86	11.58 ± 0.97	8.22 ± 0.09
2-metil-propanol	12.77 ± 2.10	19.79 ± 3.19	20.83 ± 1.42	16.30 ± 1.89	49.94 ± 4.02	34.02 ± 3.63
1-propanol	1.11 ± 0.25	1.31 ± 0.42	2.53 ± 1.65	6.02 ± 1.47	10.49 ± 1.32	12.26 ± 1.43
Isoamyl alcohol	2.53 ± 0.21	2.38 ± 0.32	1.21 ± 0.59	1.44 ± 1.44	1.90 ± 0.29	1.25 ± 0.38
1-pentanol	0.25 ± 0.04	0.20 ± 0.19	0.37 ± 0.12	0.24 ± 0.01	0.29 ± 0.09	0.31 ± 0.01
1-hexanol	0.72 ± 0.03	0.67 ± 0.09	0.56 ± 0.16	0.32 ± 0.32	0.33 ± 0.04	0.56 ± 0.24
cis-3-hexen-1-ol	0.10 ± 0.01	0.14 ± 0.24	0.44 ± 0.03	0.20 ± 0.20	n.d	n.d
2-feniletanol	5.67 ± 0.86	15.94 ± 2.72	9.72 ± 0.28	26.89 ± 5.34	56.35 ± 2.38	44.29 ± 6.02
Σ Fusel alcohols	24.00 ± 2.92	41.81 ± 5.14	36.57 ± 0.26	52.37 ± 0.20	120.17 ± 5.70	92.70 ± 5.47

2-butanol	0.18 ± 0.01	0.32 ± 0.03	0.12 ± 0.12	0.25 ± 0.05	0.43 ± 0.12	0.46 ± 0.17
1-octanol	4.35 ± 0.14	3.51 ± 0.72	1.89 ± 0.46	2.48 ± 0.21	2.34 ± 0.75	3.07 ± 0.35
Σ Other alcohols	4.53 ± 0.14	3.83 ± 0.71	2.01 ± 0.34	2.74 ± 0.16	2.77 ± 0.75	3.53 ± 0.51
Propionic acid	0.88 ± 0.03	0.56 ± 0.48	n.d	n.d	n.d	n.d
Isobutyric acid	0.19 ± 0.05	0.23 ± 0.39	0.29 ± 0.29	0.69 ± 0.69	0.78 ± 0.24	1.12 ± 0.37
Butyric acid	0.41 ± 0.07	0.33 ± 0.03	0.45 ± 0.16	0.54 ± 0.09	0.51 ± 0.04	1.14 ± 0.23
Σ SCFA	1.48 ± 0.13	1.12 ± 0.07	0.74 ± 0.13	1.22 ± 0.78	1.29 ± 0.26	2.26 ± 0.33
Octanoic acid	0.06 ± 0.01	0.24 ± 0.05	0.13 ± 0.03	0.15 ± 0.04	0.06 ± 0.01	0.17 ± 0.05
Decanoic acid	2.15 ± 0.13	2.40 ± 0.53	2.37 ± 0.51	1.88 ± 0.35	0.62 ± 0.13	0.87 ± 0.19
Dodecanoic acid	0.05 ± 0.05	0.07 ± 0.03	0.02 ± 0.02	0.05 ± 0.01	0.04 ± 0.01	0.05 ± 0.01
Σ MCFA	2.26 ± 0.13	2.72 ± 0.55	2.52 ± 0.56	2.07 ± 0.37	0.72 ± 0.14	1.09 ± 0.25

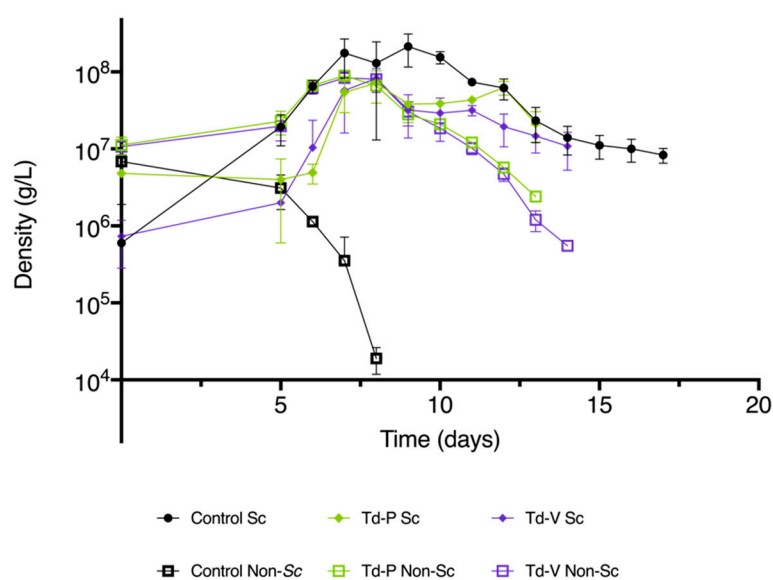


Figure S1: Control, Td-P and Td-V yeast populations during AF. Control corresponds to the pure fermentation with *S. cerevisiae* CLOS; TdP and TdV corresponds to the fermentations with *S. cerevisiae* and CM with *T. delbrueckii* Prelude or *T. delbrueckii* Viniferm, respectively. Sc yeast populations represents *S. cerevisiae* populations, while Non-Sc indicate non-*Saccharomyces* populations. Means accompanied by standard deviations (SD) based on three replicates (n=3).