Table S1: Properties of grape musts utilized in the present study.

Grape must	pH	Titratable acidity (TA) (g/L Tartaric acid)	Total sulphites (mg/L)	Brix	Brix (adaptation)	Glucose concentration (g/L)	Fructose concentration (g/L)
Assyrtiko I	3.1 ±0.0	6.9 ± 0.1	7 ± 0	18.8 ± 0.2	21.5 ± 0.1	116.1 ± 0.0	105.7 ± 0.0
Roditis I	3.4 ± 0.0	5.3 ± 0.0	3 ± 0	19.8 ± 0.1	21.4 ± 0.1	126.6 ± 0.0	119.9 ± 0.0
Roditis II	3.2 ± 0.0	4.7 ± 0.1	3 ± 0	19.5 ± 0.1	21.8 ± 0.0	140.2 ± 0.0	131.2 ± 0.0
Assyrtiko II	3.6 ± 0.0	4.1 ± 0.0	3 ± 0	21.7 ± 0.0	21.7 ± 0.0	164.7 ± 0.0	175.3 ± 0.0

Table S2: pH and titratable acidity of Assyrtiko I wines of the present study.

	pH	Titratable acidity (TA)
Derived from CFB	3.0 ± 0.0	6.8 ± 0.0
Derived from CFB100	3.0 ± 0.0	7.2 ± 0.0
Derived from BLR	3.0 ± 0.0	6.8 ± 0.0
Derived from BLR 100	3.0 ± 0.0	6.8 ± 0.0
Derived from spontaneous fermentation	2.9 ± 0.0	6.8 ± 0.0

Table S3: pH and titratable acidity of Roditis I wines of the present study.

	pH	Titratable acidity (TA)
Derived from CFB	3.5 ± 0.0	5.9 ± 1.2
Derived from CFB100	3.4 ± 0.0	6.7 ± 1.3
Derived from BLR	3.5 ± 0.0	5.4 ± 1.1
Derived from BLR100	3.5 ± 0.0	6.3 ± 1.3
Derived from spontaneous fermentation	3.4 ± 0.0	5.5 ± 1.1

Table S4: pH and titratable acidity of Roditis II wines of the present study.

	pH	Titratable acidity (TA)
Derived from CFB	3.2 ± 0.0	6.0 ± 0.1
Derived from CFB100	3.2 ± 0.0	6.2 ± 0.0
Derived from BLR	3.3 ± 0.0	5.7 ± 0.0
Derived from BLR100	3.2 ± 0.0	6.5 ± 0.0
Derived from spontaneous fermentation	3.1 ± 0.0	6.0 ± 0.0

Table S5: pH and titratable acidity of Assyrtiko II wines of the present study

	pH	Titratable acidity (TA)
Derived from CFB	3.9 ± 0.1	4.4 ± 0.4
Derived from CFB150	3.8 ± 0.0	4.6 ± 0.6
Derived from CFB100Fr	3.7 ± 0.0	5.3 ± 0.7
Derived from BLR	3.7 ± 0.0	4.3 ± 0.4
Derived from BLR200	3.7 ± 0.0	5.7 ± 0.2
Derived from BLR100Fr	3.7 ± 0.0	4.7 ± 0.3
Derived from spontaneous fermentation	3.7 ± 0.0	4.7 ± 0.0

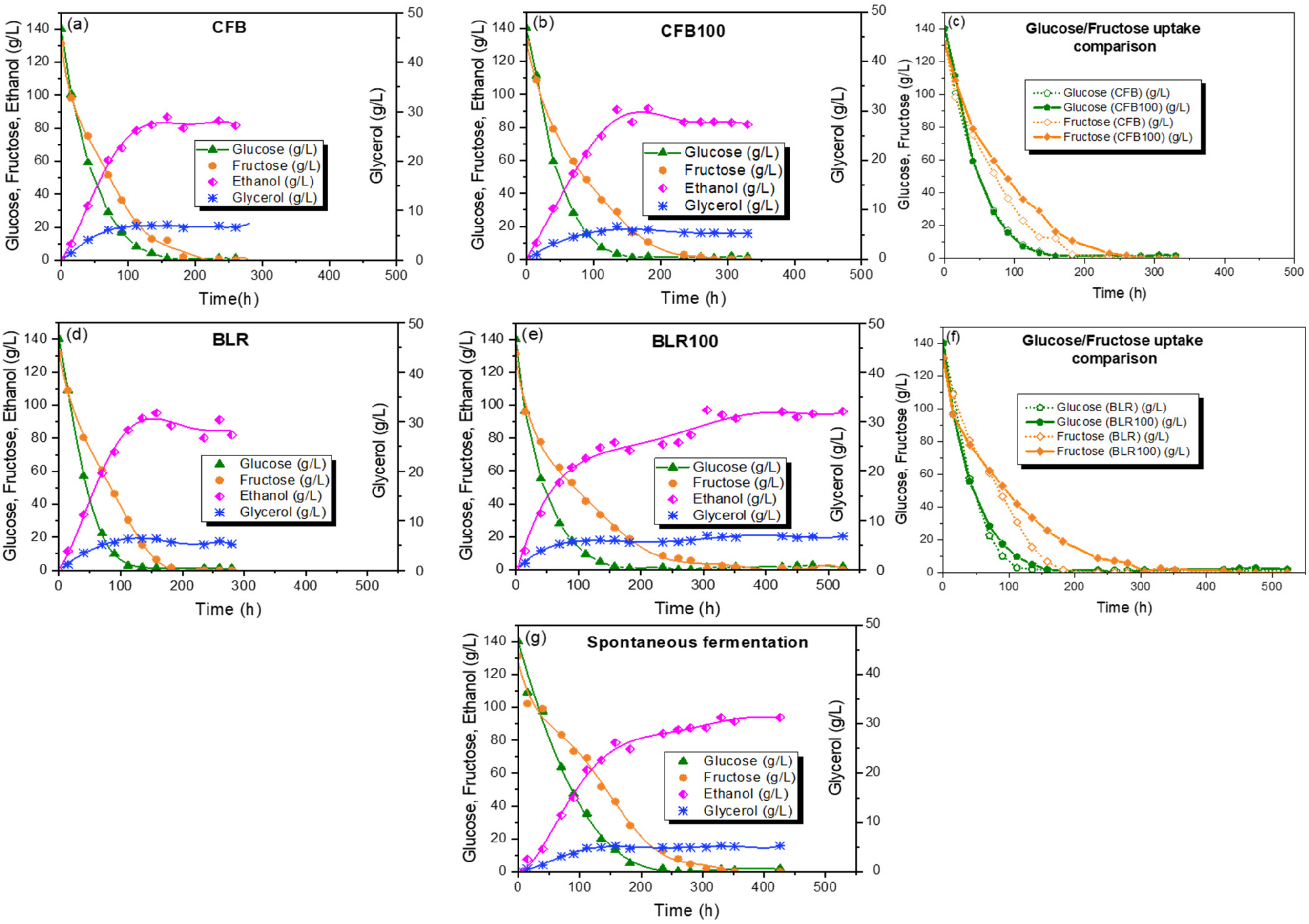

Figure. S1: Glucose and fructose consumption (g/L) and ethanol and glycerol production (g/L) of parental strains *S. cerevisiae* CFB (a) and *S. cerevisiae* BLR (d) and evolved populations CFB100 (b) and BLR100 (e) in Roditis II grape must. Comparisons of glucose and fructose uptake rates between parental strains and evolved populations are also presented (c, f). Spontaneous fermentation is also shown (g).

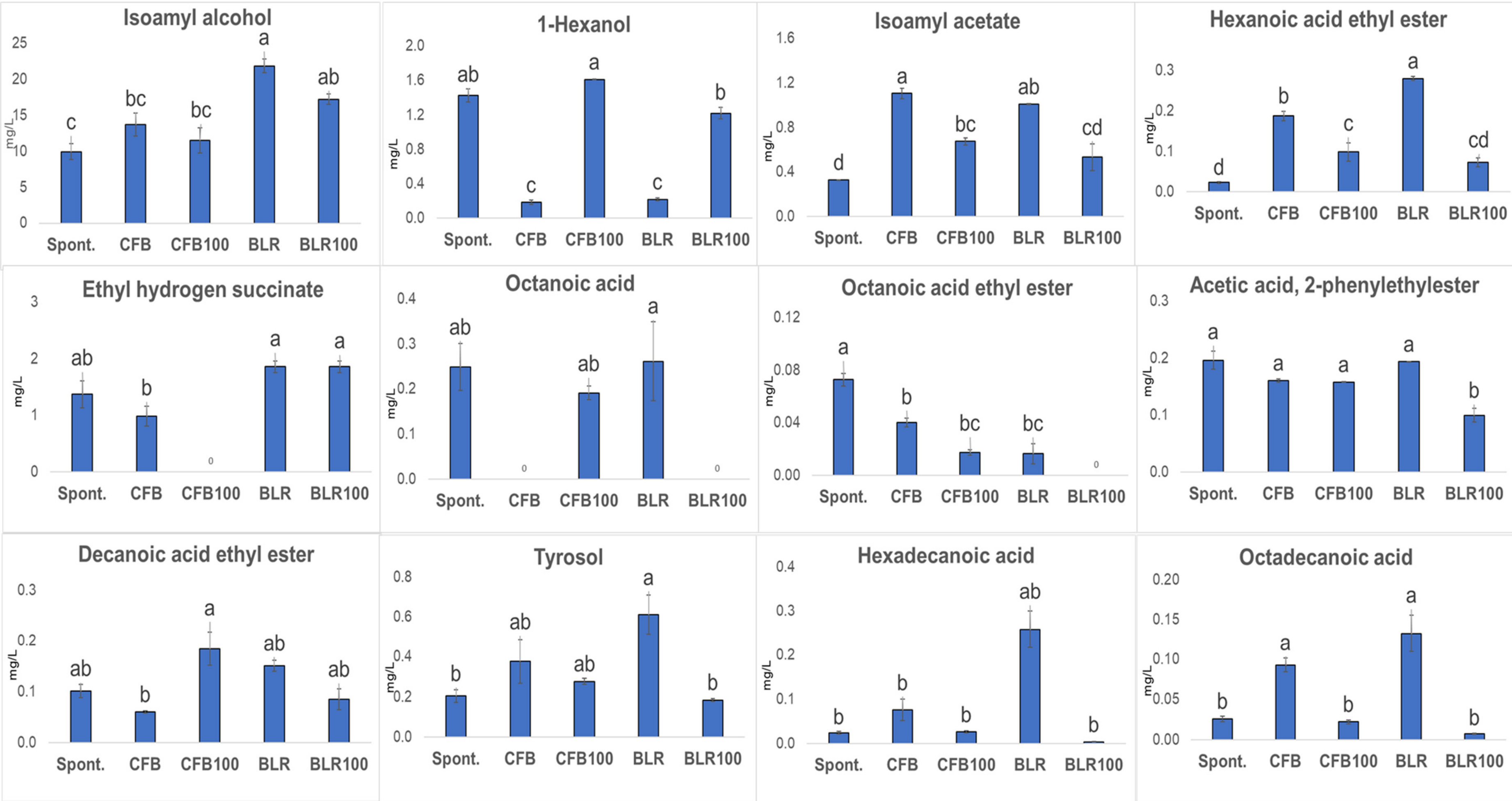

Figure. S2: Percentage content of volatile compounds in Assyrtiko I wines of the present study. Different letters in each column evince significant statistical differences (p < 0.05) between different volatile compounds.

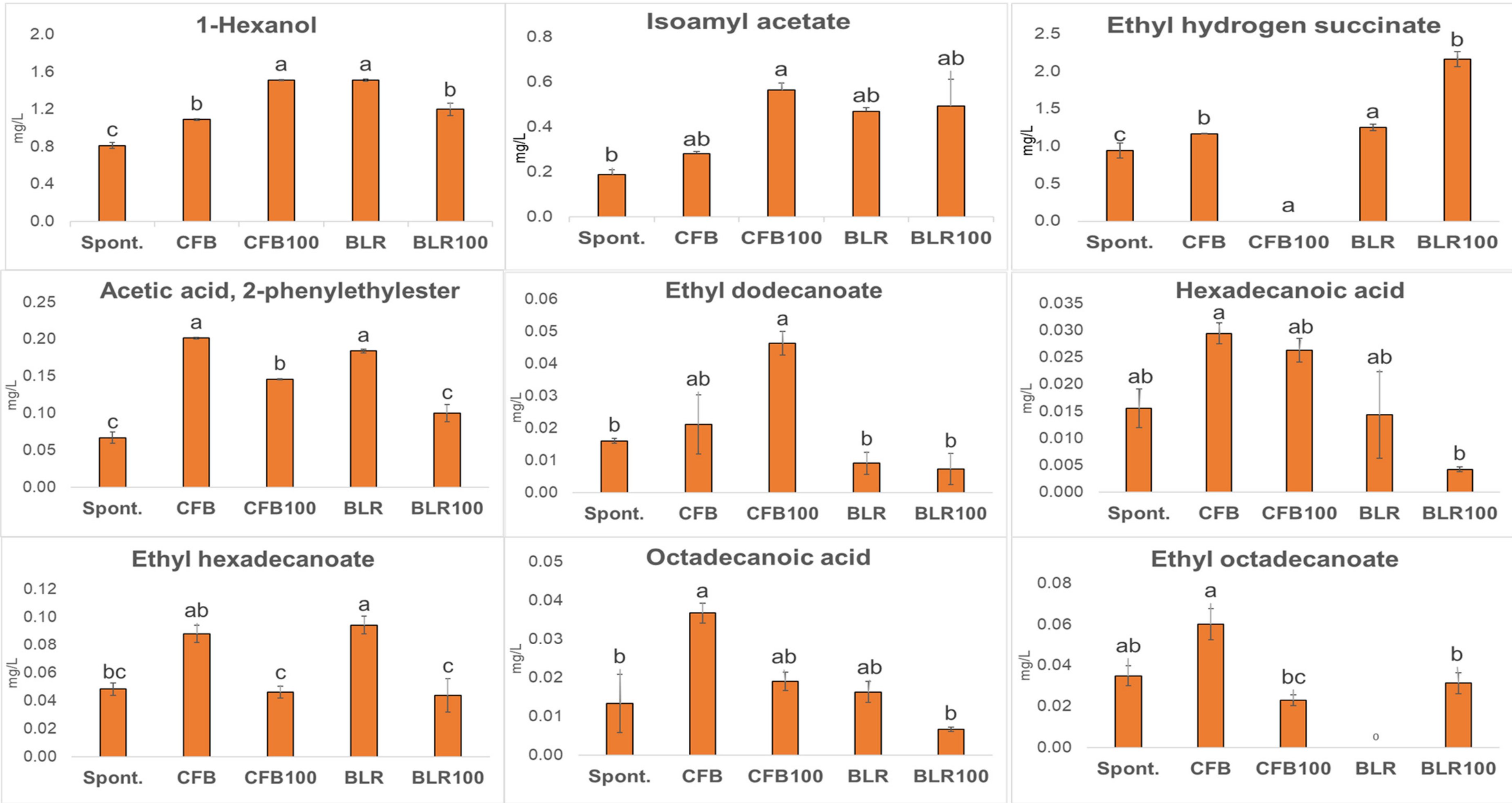

Figure. S3: Percentage content of volatile compounds in Roditis I wines of the present study. Different letters in each column evince significant statistical differences ($p < 0.05$) between different volatile compounds.

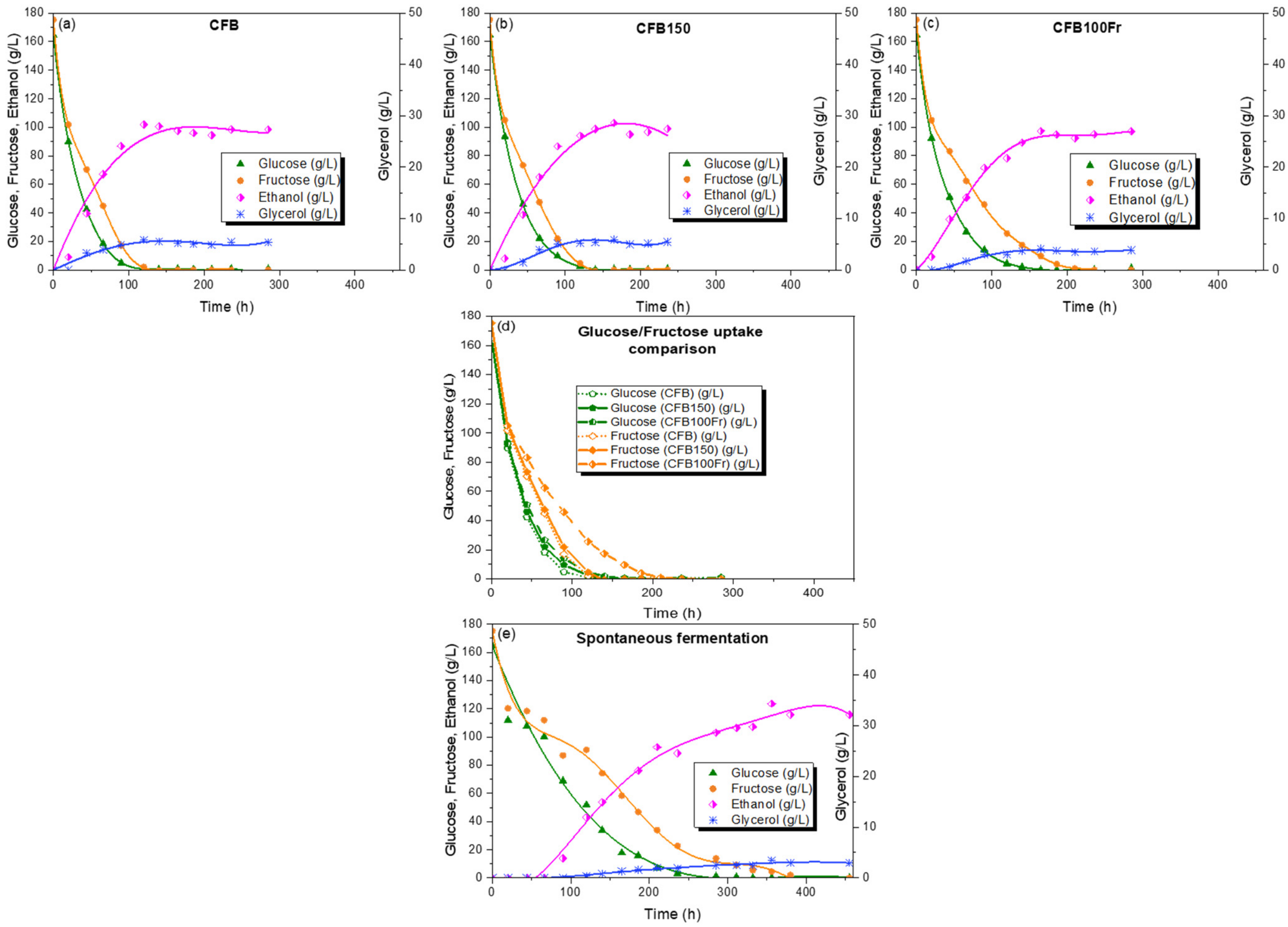

Figure. S4: Glucose and fructose consumption (g/L) and ethanol and glycerol production (g/L) of parental strain *S. cerevisiae* CFB (a) and evolved populations CFB150 (b) and CFB100Fr (c) in Assyrtiko II grape must. Comparison of glucose and fructose uptake rates between parental strains and evolved populations is also presented (d). Spontaneous fermentation is also shown (e).

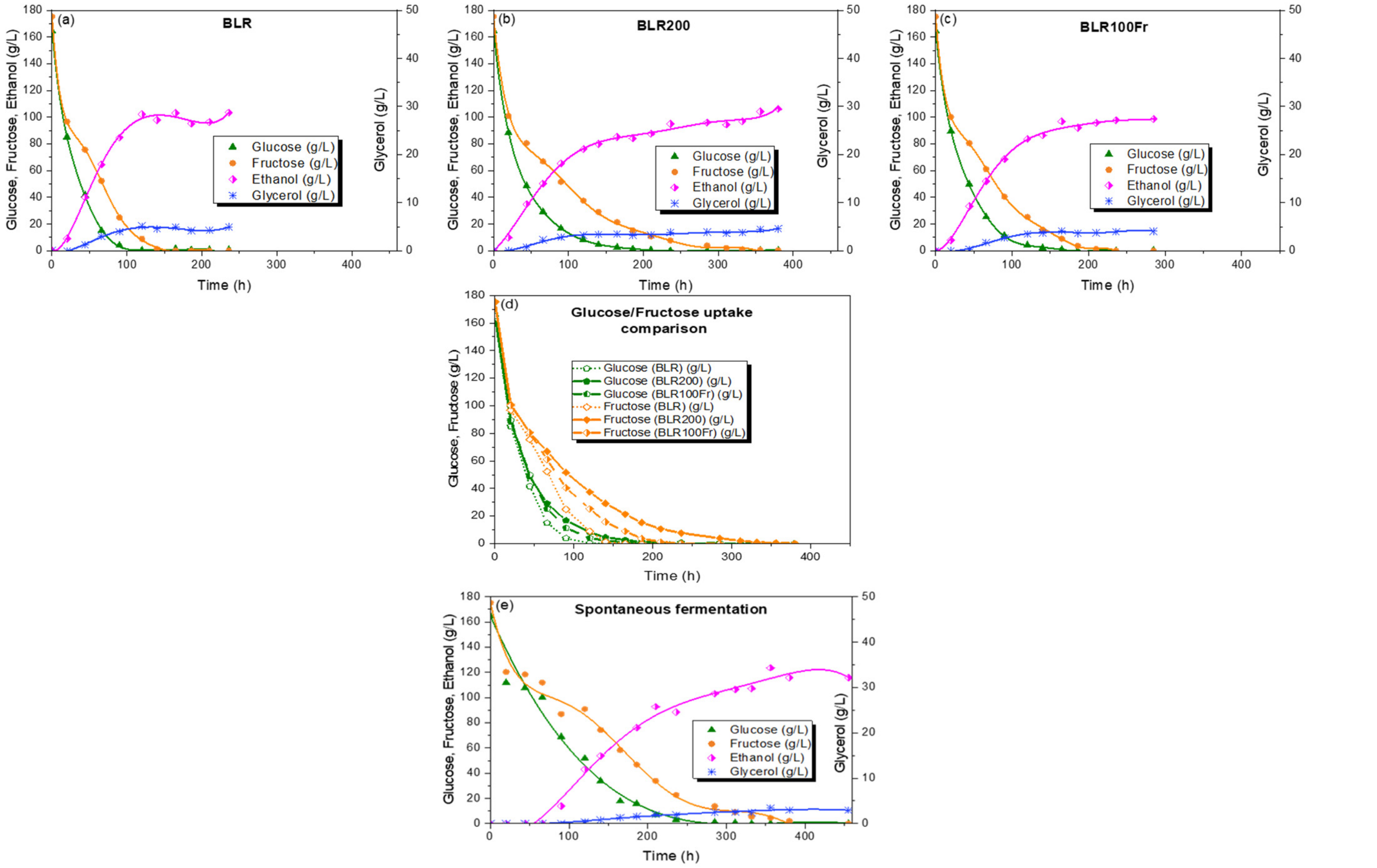

Figure. S5: Glucose and fructose consumption (g/L) and ethanol and glycerol production (g/L) of parental strain *S. cerevisiae* BLR (a) and evolved populations BLR200 (b) and BLR100Fr (c) in Assyrtiko II grape must. Comparison of glucose and fructose uptake rates between parental strains and evolved populations is also presented (d). Spontaneous fermentation is also shown (e).