

**Table S2 Parental strains and segregants metabolites production characteristics**

Strains	Suc	Gly	Ace	Pyr
S288C	0.23 (0.01)	5.55 (0.12)	1.12 (0.04)	0.06 (0.02)
59A	0.26 (0.03)	6.5 (0.06)	0.65 (0.06)	0.1 (0.01)
1b	0.3 (0.09)	5.31 (0.4)	0.45 (0.04)	0.13 (0.02)
3a	0.36 (0.07)	6.49 (0.56)	1.35 (0.11)	0.21 (0.05)
4c	0.26 (0.01)	5 (0.24)	0.28 (0.08)	0.21 (0)
5a	0.28 (0)	5.61 (0.21)	1.01 (0.13)	0.27 (0.05)
6b	0.26 (0.07)	5.56 (0.45)	0.85 (0.17)	0.22 (0.06)
7a	0.26 (0.02)	4.88 (0.44)	1.11 (0.03)	0.13 (0.02)
9a	0.25 (0.02)	5.19 (0.42)	0.99 (0.01)	0.25 (0.09)
10b	0.34 (0.1)	5.8 (0.3)	0.88 (0.2)	0.12 (0.07)
14a	0.31 (NA)	7.01 (NA)	1.33 (NA)	0.31 (NA)
14b	0.26 (0)	4.66 (0.4)	0.38 (0.04)	0.2 (0.01)
16a	0.26 (0.01)	5.54 (0.31)	0.97 (0.09)	0.14 (0.06)
16b	0.29 (0.05)	4.84 (0.26)	0.81 (0.14)	0.11 (0.06)
16c	0.3 (0.07)	5.41 (0.32)	0.72 (0.14)	0.12 (0.02)
16d	0.42 (0.01)	6.66 (0.44)	1.46 (0.21)	0.18 (0.01)
17a	0.31 (0.04)	6.88 (0.82)	0.93 (0.02)	0.25 (0)
18b	0.3 (0.03)	5.89 (0.47)	0.53 (0.1)	0.12 (0.02)
18c	0.31 (0)	5.23 (0.3)	1.23 (0.12)	0.14 (0.02)
19b	0.26 (0.06)	5.13 (0.43)	0.58 (0.11)	0.08 (0.01)
19c	0.3 (0.03)	6.7 (0.38)	1.23 (0.14)	0.26 (0.06)
20a	0.34 (0.03)	5.95 (0.33)	0.8 (0.15)	0.21 (0.01)
20b	0.34 (0.06)	5.78 (0.43)	1.25 (0.01)	0.16 (0.08)
22a	0.28 (0.08)	5.49 (0.32)	0.73 (0.16)	0.19 (0.05)
22c	0.28 (0)	4.48 (0.37)	0.99 (0.07)	0.09 (0)
22d	0.31 (0.1)	5.5 (0.32)	0.76 (0.19)	0.25 (0.05)
23b	0.45 (0.01)	5.81 (0.4)	1.03 (0.11)	0.12 (0.01)
24a	0.36 (0.03)	4.93 (0.26)	0.61 (0.2)	0.07 (0)
25a	0.33 (0.03)	6.47 (0.76)	1.25 (0.12)	0.21 (0.09)
28b	0.45 (0.04)	5.48 (0.23)	0.33 (0.01)	0.28 (0.13)
29c	0.35 (0.03)	5.57 (0.44)	0.95 (0.1)	0.13 (0.01)
31b	0.24 (0.03)	5.32 (0.13)	0.8 (0.04)	0.37 (0.07)

Standard deviation for each trait is indicated between parentheses.