



Figure S1. The experimental setup of the ministats. Four 15 mL test tubes are placed in a heat block at 30 °C and are equipped with a stopper and three needles: one for the feed, one for air supply and one for the output. Medium is fed to the test tubes from the 10 L bottle with fresh medium through a peristaltic pump. Air is pumped into the test tube through an air filter, which causes overpressure and the outflow of medium through the output needle into the collection bottle.

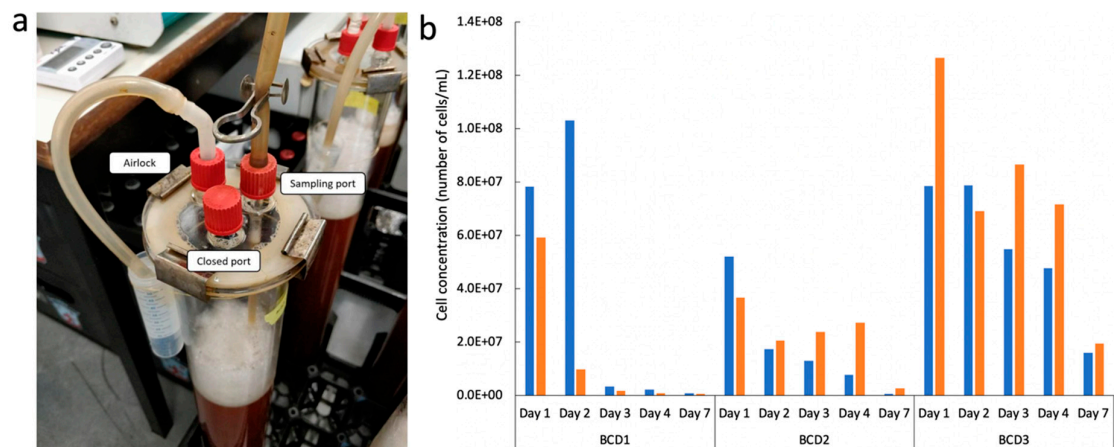


Figure S2. Beer fermentations in tall tube fermenters. **(a)** The set-up for the fermentation in tall tubes. The lid is equipped with three ports, one of which is used for sampling. **(b)** Evolution of the cell concentrations during fermentation determined using a Thoma cell counting chamber. Reference strains: ■, and evolved strains: ■.

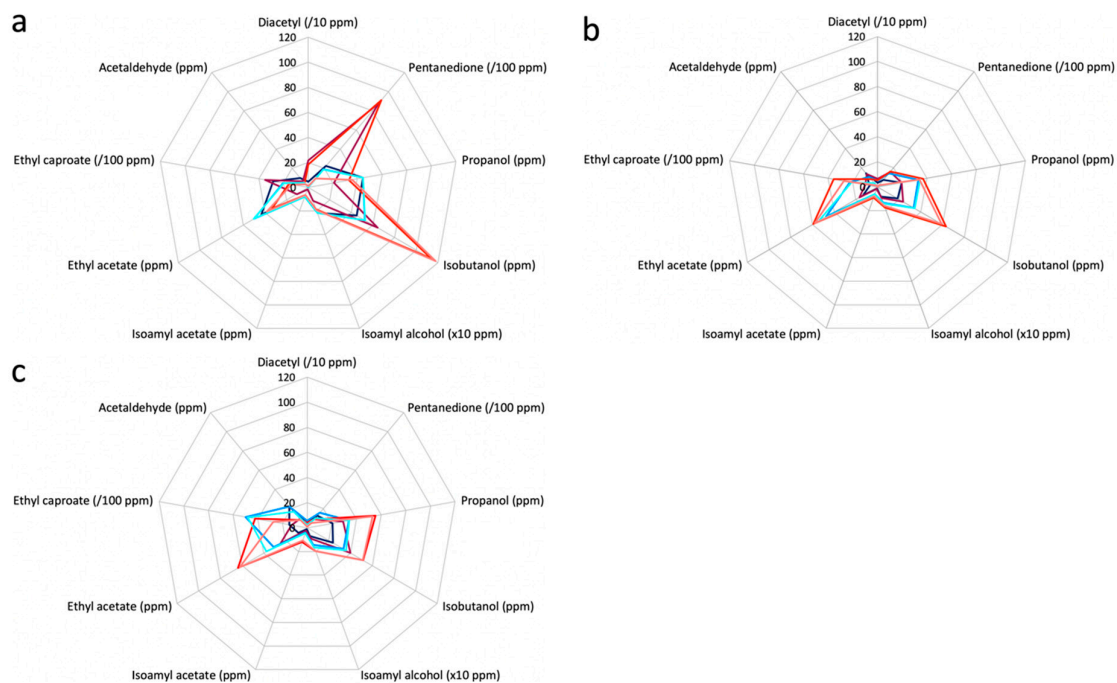


Figure S3. Comparison of the evolution of some flavor compounds during the tall tubes fermentations: **(a)** BCD 1, **(b)** BCD 2, and **(c)** BCD3 strain. The non-evolved reference strain is represented with blue colours after day 1 (—), day 2 (—), and day 3 (—); the evolved strain is represented by red colours after day 1 (—), day 2 (—), and day 3 (—).

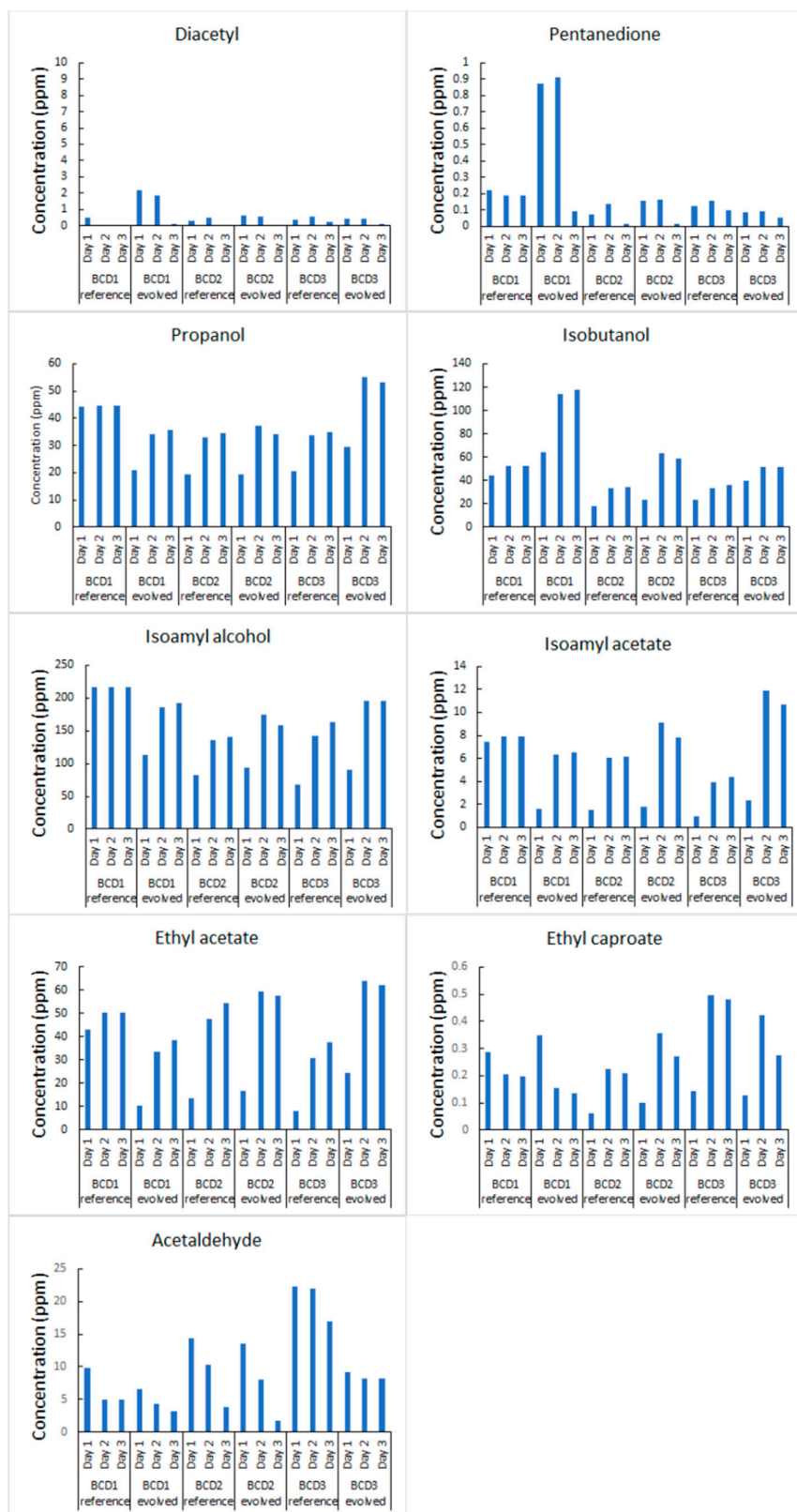


Figure S4. Comparison of the evolution of some flavor compounds during the tall tubes fermentations.

Table S1. Evolution of the apparent extract and ethanol content during the tall tube fermentations.

	Apparent extract (Ea) (%m/m)		Alcohol content (%v/v)	
	Reference	Evolved	Reference	Evolved
BCD1				
Day 1	1.7 ± 0.1	7.1 ± 0.6	4.9 ± 0.1	2.2 ± 0.3
Day 2	1.6 ± 0.1	2.0 ± 0.2	5.1 ± 0.0	4.8 ± 0.2
Day 3	1.6 ± 0.1	2.0 ± 0.1	5.1 ± 0.0	4.8 ± 0.1
	Apparent extract (Ea) (%m/m)		Alcohol content (%v/v)	
	Reference	Evolved	Reference	Evolved
BCD2				
Day 1	7.2 ± 0.0	6.7 ± 0.1	2.5 ± 0.0	2.8 ± 0.2
Day 2	2.1 ± 0.1	1.6 ± 0.3	5.2 ± 0.0	5.5 ± 0.1
Day 3	1.6 ± 0.0	1.1 ± 0.4	5.5 ± 0.0	5.6 ± 0.7
	Apparent extract (Ea) (%m/m)		Alcohol content (%v/v)	
	Reference	Evolved	Reference	Evolved
BCD3				
Day 1	8.2 ± 0.2	2.4 ± 0.2	2.0 ± 0.1	4.7 ± 0.1
Day 2	3.6 ± 0.4	0.9 ± 0.0	4.5 ± 0.1	5.5 ± 0.0
Day 3	1.4 ± 0.2	0.8 ± 0.0	5.6 ± 0.1	5.5 ± 0.0