

**Table S1.** Growth rate datasets for the effects of temperature (**A**), pH (**B**) and water activity (**C**).

	T (°C)	$\mu_{\max}$ (h <sup>-1</sup> )
<b>A</b>	5.5	0.007
	11	0.087
	18	0.258
	18	0.241
	20	0.319
	20	0.288
	22	0.39
	22	0.392
	27	0.549
	27	0.553
	35	0.787
	35	0.769
	39	0.255
	39	0.235
	pH	$\mu_{\max}$ (h <sup>-1</sup> )
<b>B</b>	3.2	0.083
	3.2	0.089
	3.3	0.208
	3.3	0.217
	3.4	0.359
	3.4	0.362
	3.5	0.393
	3.7	0.489
	4.1	0.654
	4.6	0.662
	5.2	0.731
	5.8	0.736
	6.3	0.745
	6.8	0.706
	7.3	0.701
	7.6	0.672
	8	0.611
	8.7	0.585
	9.1	0.489

	$a_w$	$\mu_{\max} (h^{-1})$
C	0.996	0.786
	0.996	0.724
	0.992	0.674
	0.992	0.687
	0.989	0.638
	0.987	0.668
	0.98	0.479
	0.975	0.415
	0.975	0.402
	0.972	0.182
	0.97	0.189
	0.965	0.076
	0.965	0.06

**Table S2.** Growth rate datasets for the effects of undissociated lactic acid [HA] at pH 4.7 (**A**) and 5.1 (**B**)

	pH	[HA] (mM)	$\mu_{\max} (\text{h}^{-1})$
<b>A</b>	4.7	0	0.415
	4.7	5	0.442
	4.7	5	0.452
	4.7	15	0.483
	4.7	15	0.464
	4.7	30	0.358
	4.7	30	0.393
	4.7	40	0.321
	4.7	40	0.312
	4.7	50	0.261
	4.7	50	0.292
	4.7	60	0.227
	4.7	60	0.197
	4.7	70	0.216
	4.7	70	0.185
	4.7	80	0.163
	4.7	80	0.157
	4.7	100	0.061
	4.7	100	0.104
	pH	[HA] (mM)	$\mu_{\max} (\text{h}^{-1})$
<b>B</b>	5.1	0	0.507
	5.1	0	0.458
	5.1	5	0.488
	5.1	5	0.603
	5.1	15	0.543
	5.1	15	0.571
	5.1	30	0.487
	5.1	30	0.438
	5.1	40	0.413
	5.1	40	0.428
	5.1	50	0.374
	5.1	50	0.403
	5.1	60	0.323
	5.1	60	0.39
	5.1	70	0.315
	5.1	70	0.367
	5.1	80	0.338
	5.1	100	0.245
	5.1	100	0.294