Table 2. Metabolite production (C-mmol C-mol substrate⁻¹) from different Kluyveromyces marxianus cultivations

Cultivation mode	Culture (h ⁻¹)	Citrate	2-Oxoglutarate	Pyruvate	Succinate	Lactate	Fumarate	Acetate	Glycerol	Ethanol
Batch*	$\mu_{max} = 0.56 \pm 0.02$	0.82	17.12	20.52	1.74	1.53	0.81	22.15	4.55	10.12
Continuous ^{†,‡}	D = 0.1	0 ± 0	1.84 ± 0.24	7.98 ± 1.27	0.21 ± 0.06	4.22 ± 2.99	0 ± 0	11.18 ± 1.86	0 ± 0	1.87 ± 0.48
Continuous [†]	D = 0.1	0 ± 0	0.03 ± 0.07	0.33 ± 0.24	0 ± 0	0 ± 0	0 ± 0	1.33 ± 0.17	0 ± 0	0 ± 0
Continuous [†]	D = 0.25	0 ± 0	0.11 ± 0.16	0.50 ± 0.16	0 ± 0	0.08 ± 0.18	0.03 ± 0.06	1.40 ± 0.16	0.57 ± 0.69	2.00 ± 0.07
Continuous†	D = 0.5	0 ± 0	14.12 ± 3.07	11.50 ± 2.56	2.34 ± 1.46	$\boldsymbol{0.29 \pm 0.13}$	3.32 ± 0.24	15.25 ± 2.81	0 ± 0	8.52 ± 0.22

^{*}Data refer to the instant when total metabolite concentration was the highest (20.5 h, Fig. 1). Average and SD calculated from two independent cultivations.

*Average and SD calculated from five samples obtained at 1-h intervals during each steady state.

*This cultivation was carried out under the same conditions as the other experiments in this work (30 °C, pH 5.0, glucose 10 g L⁻¹), except for aeration, which was 2.5 v.v.m., instead of 1 v.v.m.