

Electronic Supplementary Information

Captions of Tables and Figures

Table. 1. Process parameters during the ten-recycling fermentation batches in 30 L fermenter

Fig. 1. Traditional fermentation process for CA production in 5 L fermenter

Fig. 2. CA production (a), total sugar uptake (b) in the ten-recycling batches in 30 L fermenter (F1~F10 represent the ten-recycling fermentation batches, respectively).
Data are means $\pm$ SD (n=3).

Table 1

Batches	^a Q_{CA} (g /L/ h)	^b q_{CA} ($10 \times$ g/g/h)	^c Y_{CA} (g/g)
F 1	1.91 ± 0.12	0.81 ± 0.02	0.84 ± 0.06
F 2	1.90 ± 0.21	0.84 ± 0.02	0.89 ± 0.03
F 3	1.90 ± 0.33	0.82 ± 0.05	0.91 ± 0.07
F 4	1.93 ± 0.31	0.87 ± 0.01	0.93 ± 0.12
F 5	1.94 ± 0.29	0.94 ± 0.03	0.96 ± 0.11
F 6	1.93 ± 0.19	0.90 ± 0.02	0.93 ± 0.08
F 7	1.94 ± 0.12	0.84 ± 0.02	0.92 ± 0.05
F 8	1.97 ± 0.06	0.87 ± 0.05	0.95 ± 0.08
F 9	1.95 ± 0.29	0.85 ± 0.01	0.95 ± 0.04
F 10	1.95 ± 0.21	0.83 ± 0.03	0.96 ± 0.02

(F1~F10 represent the ten-recycling fermentation batches, respectively)

^a Q_{CA} = volumetric citric acid productivity.

^b q_{CA} = specific rate of citric acid production.

^c Y_{CA} (g/g) = yield of citric acid (g citric acid per total sugar)

Data are means $\pm$ SD (n = 3)

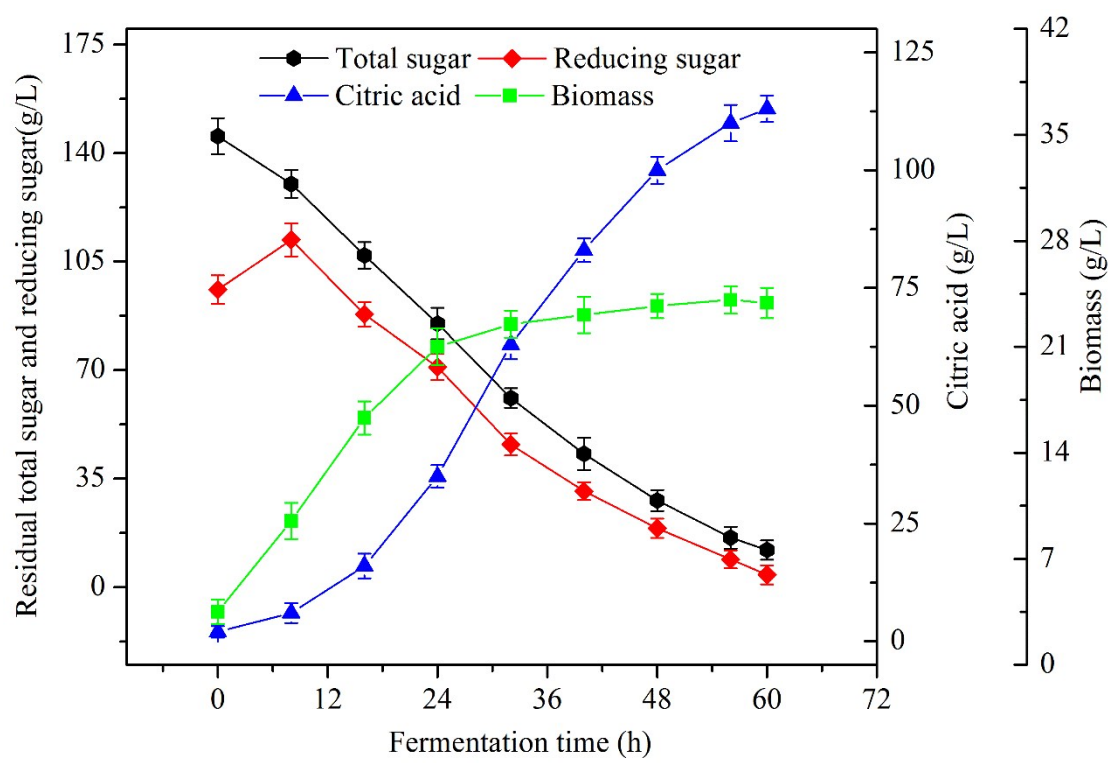


Fig. 1

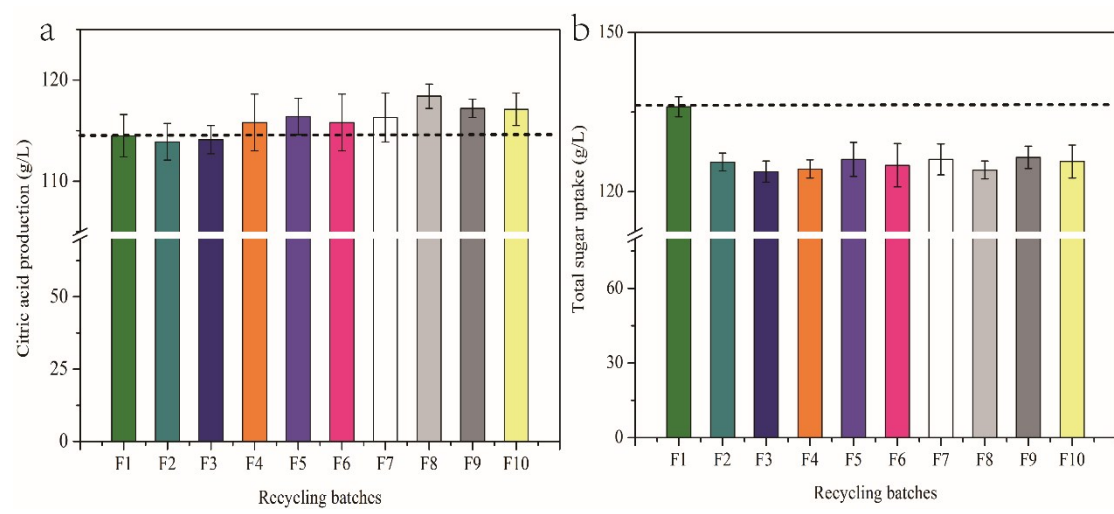


Fig. 2