Biobased organic acids production by metabolically engineered microorganisms

Bio-based production of organic acids via microbial fermentation has been traditionally used in food industry. With the recent desire to develop more sustainable bioprocesses for production of fuels, chemicals and materials, the market for microbial production of organic acids has been further expanded as organic acids constitute a key group among top building block chemicals that can be produced from renewable resources. Here we review the current status for production of citric acid and lactic acid, and we highlight the use of modern metabolic engineering technologies to develop high performance microbes for production of succinic acid and 3-hydroxypropionic acid. Also, the key limitations and challenges in microbial organic acids production are discussed.

General information
Publication status: Published
Organisations: Novo Nordisk Foundation Center for Biosustainability, Yeast Cell Factories, Chalmers University of Technology
Contributors: Chen, Y., Nielsen, J.
Number of pages: 8
Pages: 165-172
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Current Opinion in Biotechnology
Volume: 37
ISSN (Print): 0958-1669
Ratings:
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 8.55 SJR 3.367 SNIP 2.115
Web of Science (2016): Impact factor 9.294
Web of Science (2016): Indexed yes
Original language: English
DOIs:
10.1016/j.copbio.2015.11.004
Source: FindIt
Source ID: 2290096101
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review