Review of: "Techno-Economic Fermentative Microbe-Based Industrial Production of Lactic Acid (LA): Potential Future Prospects and Constraints"

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Potential competing interests: No potential competing interests to declare.

Qeios-review

Entitled: "Techno-Economic Fermentative Microbe-Based Industrial Production of Lactic Acid (LA): Potential Future Prospects and Constraints"

This review is considered an interesting subject. But, the manuscript was written poorly, did not handle perfectly, and needs careful revision. The sentences are very long and difficult to understand, others are not matched with the initial titles, and others are incomplete.

-Authors need to revise the following sentences carefully:

-To improve cellulase cocktails, experiments involving various fermentation techniques, switching to one-step feeding, detoxification of 2G sugars, selection of microbes from different metabolic environments, and subjecting LA fermenting microbes to adaptive evolution may tend to produce desirable outcomes. There are two pathways for cellulase cocktails, which include co-fermentation and synchronized saccharification. Enzymatic pre-hydrolysis initiates sugar release, followed by fermentation by a bacterium, improving efficiency and minimizing OPEX and CAPEX.

- Kluyveromyces marxianus' D-lactate dehydrogenase was disrupted by the change [36].

-Thirteen out of 26 rotten fruit and soil isolates were tested for wood hydrolysate fermentation. Lactobacillus paracasei 7B was selected with the aim of modifying it further by inhibiting ldhD due to its high lactic acid production and tolerance [37] [38].

-A study utilized a genetically engineered strain JU15 of Escherichia coli to convert sugarcane bagasse and maize stover hydrolysates into D-lactic acid. The modified strain, AV03, exhibited simultaneous sugar intake without acetic acid production, with a D-lactic acid output of approximately 0.95 g/g sugars. The transformed strain JU15 was utilized to produce both lactic and acetic acids [41].

-6.2. Fermentation of Microbial Strains and High Product Yield…….

Text related to this title needs to be revised carefully ….. phrasing ……..Also, data about continuous fermentation is

absent.

-6.3. Fermentation of Immobilized Microbial Strains

Text under this title does not match.

-Latin names should be italicized

of Escherichia coli, using Lactobacillus pentosus, from Chlorella vulgaris, Lactobacillus casei cells

, Bacillus sp. , strain B. coagulans

-Spaces missedxxxx

usingxxxLactobacillus, thatxxxxxBacillus , fromxxxxxChlorella vulgaris

-for 24 hours…….change into 24h…… revise in the whole manuscript

Change g/l into g/L……revise in the whole manuscript

-Regarding the method of production, two well-established procedures now in use are fed-batch fermentation and solid-state filtration…. ….change into solid-state fermentation

-Lactic Acid……change into LA…….REVISE in the whole manuscript