



SDI Review Form 1.6

Journal Name:	British Microbiology Research Journal
Manuscript Number:	2013_BMRJ_8224
Title of the Manuscript:	Improved Cultural Conditions for Methionine Accumulation in Submerged Cultivation of <i>Bacillus cereus</i> S8
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The research manuscript under review relates to methionine accumulation in submerged cultivation of <i>Bacillus cereus</i> S8. The subject of study presented is interesting and relevant in the area of microbiology. The Authors have undertaken the study in a highly disjointed manner. The methodology described is very much confused and after going through it gives an impression that each of the selected parameters influencing methionine production is studied separately. The medium used to prepare seed culture of <i>B. cereus</i> is fine and the next is the fermentation medium with all the constituents mentioned. This also reads well and methionine produced in this medium was assayed for methionine. The major drawback lies in the experimental approach for optimization of fermentation conditions. In the case of medium/fermentation volume ratio and inoculum size, it is quite clear that the earlier mentioned fermentation medium was used. When you come to effect of carbon sources, what was the basal medium used for each one of the sugars included in the study? If it is the same fermentation medium, then was glucose replaced by other respective sugars in a step-wise manner. Already, the fermentation medium had glucose initially and resulted	We disagree with the reviewer on the disjointed manner of the methodology. Part of the methodology had earlier been published in British Microbiology Research Journal 2012.2(1):36-39. We wonder how the comments were derived if the methodology was very much confusing. The basal medium is the same for all the experiments conducted. Yes, glucose was replaced by other respective sugars in a step-wise manner. Fig. 1 has a value of 1.55mg/ml while the study on glucose gave



SDI Review Form 1.6

	in 1.45 mg/ml, methionine (mentioned in results & discussion for medium/fermentation volume ratio). With carbon sources studied, glucose resulted in 1.62 mg/ml; what is the statistical significance between 1.45 and 1.62 mg/ml? The same drawback lies with experimental designs of effect of nitrogen sources, growth stimulators, vitamins and amino acids, wherein there is no mention of basal medium and how each one of these constituents were studied and in what medium? No details are included under methodology. For time course experiment, Authors should have undertaken the experiments based on response surface methodology using the CCRD design depending upon the factors/variables necessary to study the influence on methionine. Here, the best individual influence factor are selected and pooled to have the design that would have in all either 21 or 31 experiments based on no. of factors / variables used in study. Methodology is the major drawback and whatever results presented have no relevance and standing. What about statistical analysis of results? None of the figures presented have error bars. How did the authors identify the culture to the species level like <i>Bacillus cereus</i> just based on 16S rRNA. Any established reference for this identification? Growth measurement by Spectrophotometric reading at 660 nm, is not very reliable. How can increase in bacterial viable populations relate with increase in OD, as OD of 1.0 can only be the valid reading. Dilution of	1.52mg/ml. It was a typographical error. This was done to avoid repetition. Basal medium was used for all the optimization process and then the best nitrogen and carbon concentration with the other additives such as growth stimulators, vitamins, amino acids were used for the fermentation processes. We did not just arrive at the medium for time course in only one experiment. In designing the experiment, we chose two of the best influencing factors and in various combinations to determine the best medium for production. In all, we had eighteen experiments. The statistical analyses of the results have been included. Macrogen Incop. Republic of Korea did the identification. See line 45 and line 245. The spectrophotometer used for the study, see line 70, can obtain readings of more than 1.0. Moreover, our interest was not
--	---	--



SDI Review Form 1.6

	culture broth and taking readings and back calculating OD & bacterial populations are not very reliable and can be highly erroneous. In the background of above documented facts, the research manuscript. Authors, if they could undertake major revision of their paper with valid and meaningful experimental designs can have an opportunity for considering the manuscript in accordance with the guidelines of the Journal.	really on growth but on product formation.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		