

Review Form 1.7

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	Ms_IJBCRR_103655
Title of the Manuscript:	Physico-chemical attributes to develop formulation of ice cream mix utilizing whey concentrate preserved by hurdle technique
Type of the Article	Research article

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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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>It could have been important to scientific community if the manuscript was written properly and few analyses was done incorrectly</p> <p>Alternative title: Developing formulation of ice cream utilizing preserved whey concentrate and characterizing such ingredient for quality aspects</p> <p>In Abstract, they have penned down 'Introduction' portion. No conclusion of research mentioned in this section.</p> <p>Subsections and structure are appropriate</p> <p>Several errors are found; hence scientifically not completely correct</p> <p>Some references are too old (1990s) to be quoted in 2023; rest are okay. I have suggested two references; there are more too.</p> <p>Lactose content has been specified in later part of investigation, where in actual practice such parameter is 'Total carbohydrates' (i.e. lactose plus sucrose together). For Melting resistance test, only 10 g of ice cream sample was taken; in actual practice 100 g of ice cream sample is to be taken for such test.</p> <p>At later part, lactose hydrolysis of whey has been carried out. They have not mentioned at what stage whey was hydrolysed (i.e. unconcentrated or after concentration). They had added sugar to whey concentrate, however, when whey was subjected to lactose hydrolysis, it would be sweeter and so again the sugar level should have been tested (lower amount than when lactose was not hydrolysed in whey concentrate). They had used preservative in Whey concentrate to prolong its shelf life, but they did not study its shelf life. Secondly, FSSAI does not permit use of preservatives (i.e. K-sorbate) in Ice cream. When any one uses ingredient having such preservative, ice cream is also bound to contain such non-permitted additive.</p> <p>Few paragraphs (related to discussion) were repeated towards end of the manuscript (without such need)</p> <p>The sweetened/lactose hydrolysed whey concentrate was intended for ice cream. Hence ice cream was required to be characterized for several aspects including sensory quality, which was not carried out. The optimized sweetened whey concentrate (50% TS inclusive of sugar) was to be used in ice cream and clearly studied in ice cream. Though under 'M & M' section FP of ICM, overrun in ice cream, penetrometer analysis of hardened ice cream is mentioned – no Table in the manuscript has such data; neither any mention in the manuscript</p>	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> 1. Is language/English quality of the article suitable for scholarly communications? 	<p>The English language has to be improved upon.</p>	

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<p>Optional/General comments</p>	<p>Additional key words have been suggested by me When using word 'Functional' let the authors clearly indicate whether it refers to the 'physical properties' (viz., water holding, emulsifying, whipping ability, etc.) or were referring to 'health-promoting' aspects. They have used whey concentrate in experiment. But under Introduction, they have only discussed 'whey' and not 'whey concentrate'. Whey solids can only partly replace regular source of MSNF (i.e. Skim milk powder) in ice cream. They are writing 'Whey solids can replace MSNF in ice cream' – write very clearly. At once place they wrote addition of 'lactose' in ice cream – No one ventures to add 'lactose powder' in ice cream preparation; whey solids is a source of lactose.</p> <p>Overall lots of errors are there in the experimentation. At some instances, sugar is mentioned as Total Solids and at other places 'Total carbohydrates' is mentioned as 'Lactose'.</p> <p>Utensils and glasswares – need not be written under 'Materials and Methods' Under 'M and M' vacuum taken and temp. during condensing of whey has not been mentioned. In actual practice, they had analysed properties of whey concentrate (Table No. 3)</p> <p>Ash content of sweetened whey concentrate should increase (there is ash from sugar too), in their case ash decreased. For lactose hydrolysis in whey using Lactase enzyme they have not mentioned, temp., pH and time duration for hydrolysis.</p> <p>Physico-chemical properties of 'whey concentrate' analysis is not mentioned under 'M and M'</p> <p>Duncan values (superscripted alphabets) to show statistically significant ($p < 0.05$) are missing. While discussing such statistical difference, whether difference exists at each level of TS of whey concentrate or at each level of sugar addition – is not mentioned at all. They just mention – 'X' aspect is significantly ($p < 0.05$) affected (vague sentence)</p> <p>They have not concluded any matter under 'Conclusions' – Rather they had dwelled upon health bearing aspect, which was not the part of their study.</p> <p>Arrange the references (more than one) in ascending order of year</p> <p>Under References, arrange the references alphabetically (i.e. From 'A' to 'Z') For Ref. Steinshold and author (1999) name of Journal is missing.</p>	
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PART 2:

	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)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

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