

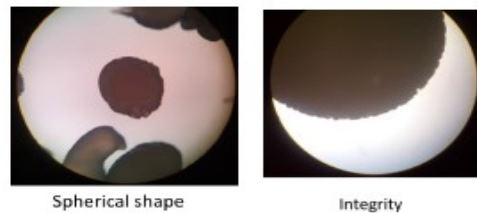
Functional Mixed Starter Culture for *Idli* Batter Fermentation

Salient features

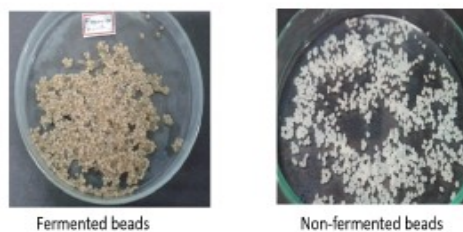
- Dry mix of *idli* batter
- Identification of the specific consortium of bacterial isolates for the starter culture.
- Formulation of stable encapsulated functional starter cultures.
- Identification of the fermentation microflora of *idli* batter.
- Lactic acid bacterial species and *Bacillus* spp in the household *idli* batter samples at various fermentation periods.
- Identification and characterization of a novel galactan.

Advantages

- ✓ Increase in the fermentation efficiency due to addition of starter cultures to *idli* batter.
- ✓ Probiotic properties especially non-hemolytic, acid and bile tolerance, antioxidant activity and transits tolerance.



Micro geometrical properties of encapsulated *P. pentosaceus* beads



Shape of fermented and non-fermented beads

Process technology / product developed by

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<i>Year</i>	2014-15
<i>Source of funding</i>	MoFPI
<i>More information</i>	<p>Status of commercialization / Patent / Publications</p> <p>Publications</p> <p>Saravanan, K., Digambar, K., Kandasamy, S., Devi, P.B. and Shetty, P.H. 2019. Production, partial characterization and antioxidant properties of exopolysaccharide α-D-glucan produced by <i>Leuconostoc</i> KC117496 isolated from an <i>idli</i> batter. Journal of Food Science and Technology, 56: 159-166.</p> <p>Saravanan, C. and Shetty, P.H. 2015. Isolation and characterization of exopolysaccharide from <i>Leuconostoc</i> KC117496 isolated from <i>idli</i> batter. International Journal of Biological Macromolecules, 90: 100-106.</p> <p>Kavitake, D., Devi, P.B., Singh, S.P. and Shetty, P.H. 2016. Characterization of a novel galactan produced by <i>Weissella confusa</i> KR780676 from an acidic fermented food. International Journal of Biological Macromolecules, 86: 681-689.</p> <p>Devi, P.B., Kavitake, D. and Shetty, P.H. 2016. Physico-chemical characterization of galactan exopolysaccharide produced by <i>Weissella confusa</i> KR 780676. International Journal of Biological Macromolecules, 93: 822–828.</p> <p>Kavitake, D., Kandasamy, S., Devi, P.B. and Shetty, P.H. 2018. Recent developments on encapsulation of lactic acid bacteria as potential starter culture in fermented foods - a review. Food Bioscience, 21: 34-44.</p> <p>Kavitake, D., Singh, S.P., Kandasamy, S., Devi, P.B. and Shetty, P.H. 2020. Report on aflatoxin-binding activity of galactan exopolysaccharide produced by <i>Weissella confusa</i> KR780676. 3 Biotech, 10: 181.</p> <p>Patent</p> <p>Novel galactan from <i>Weissella confusa</i> KR780676: Characterization and its physico-chemical properties.</p> <p>Galactan polymer from <i>Weissella confusa</i> KR780676: process for the polymer production and its applications.</p> <p>Development of functional instant <i>idli</i> mix.</p>