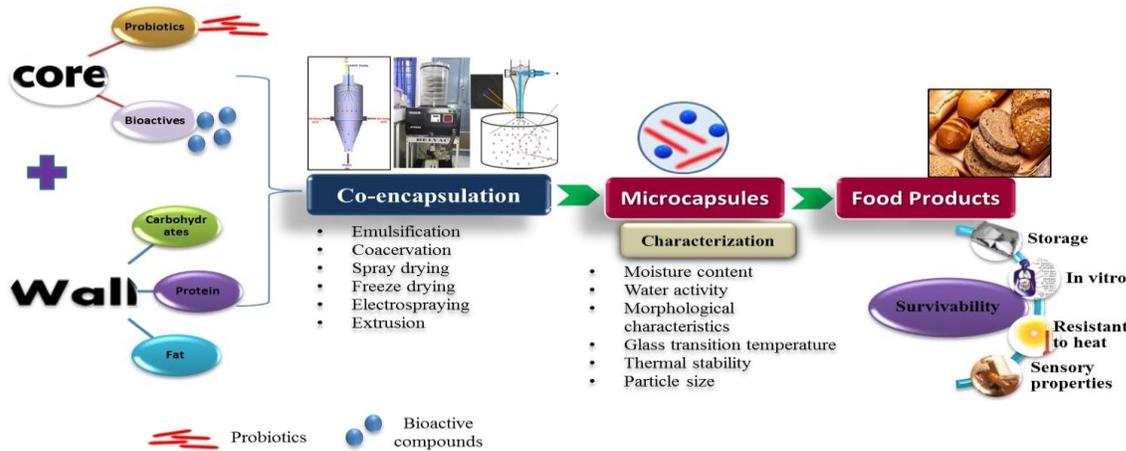


Introduction



Results and Discussion

Table 1: Physicochemical properties of co-microcapsules

Properties	
LAB encapsulation efficiency (%)	92.12 ± 0.8
GABA encapsulation efficiency (%)	82.46 ± 2.2
Moisture content (%)	4.05 ± 0.36
Water activity	0.27 ± 0.07
Drying yield (%)	59.5 ± 3.1
Hausner Ratio (HR)	1.12 ± 0.03
Carr's Index (CI) (%)	13.18 ± 0.21

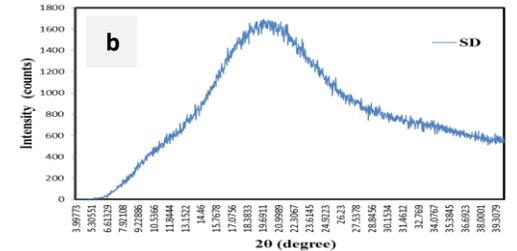
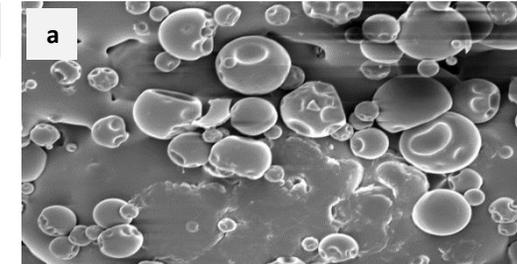


Fig 1: (a) SEM analysis; (b) XRD of co-microcapsules

Objectives

- To characterize the spray dried co-microcapsules containing probiotic strain *Lactococcus lactis* SKL 13 and γ -aminobutyric acid (GABA).

Methodology

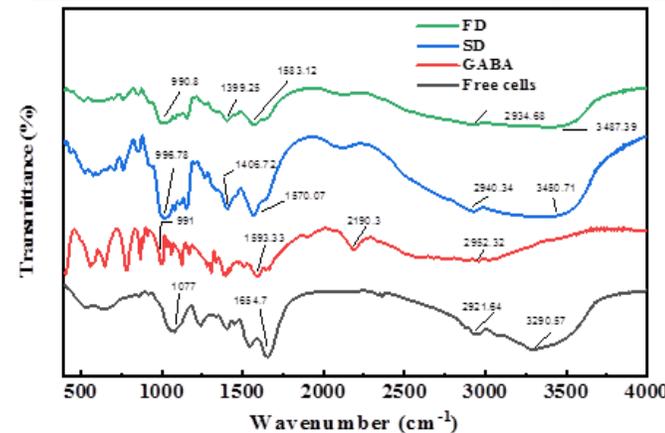


Fig 2: FTIR spectra of free cells, GABA, and spray dried microcapsules

Conclusion

- The microcapsules showed higher viability of LAB, GABA with lower moisture content and water activity after spray drying.
- In FTIR spectra, the free LAB cells and GABA characteristics peaks in the spray samples confirmed the encapsulation of probiotics and GABA within the polymeric matrix.
- No crystalline peak was observed for spray dried powders, indicating the amorphous nature as shown by the XRD patterns.