Supplementary Materials

Figure legends

Figure S1 Swelling behaviour and encapsulation efficiency of different microcapsules with alginate and gum

(** significant findings)

Figure S2 Evaluation of microcapsule survival rate under GIT conditions (*** Highly significant; ** Significant)

(OBG-oats bran gum; Ag-alginate; C-chitosan; WP-whey protein)

Figure S3 Loss of cell viability on 60^{th} day for alginate OBG microcapsule coated with whey protein

(*** Highly significant; ** Significant)

Figure S4 Surface analysis for alginate OBG microcapsule with coating materials a: whey protein; b: chitosan

(Before and after GIT stimulation)

Table S1 Microcapsule size based on the gum materials

Microcapsule size (μm)	Alginate-RBG	Alginate-OBG	Alginate-BBG	Alginate-FMG	Alginate-PMG
600-650		→			
700-750			→		
750-800				→	→
800-850					
850-900	→				

Table S2 Composition of gum extracted from various cereal brans

Cereal brans	Carbohydrate (%)	Protein (%)	Dietary fiber (%)	β-Glucan content (%)	Viscosity (mPa/s)
Rice	62 ± 0.22	15 ± 0.6	23 ±0.6	46 ± 0.26	0.95
Oats	30 ± 0.35	22 ± 0.2	48 ±0.1	66 ± 0.15	1.88
Barley	34 ± 0.47	29 ± 0.1	37 ±0.2	58 ± 0.23	1.16
Finger millet	35 ± .034	30 ± 1.2	35 ±0.4	40 ± 0.31	0.99
Pearl millet	32 ± 0.55	32 ± 0.4	36 ±0.2	42 ± 0.22	1.04

Average values (SD±) from three independent repetitions are presented

Figure S1

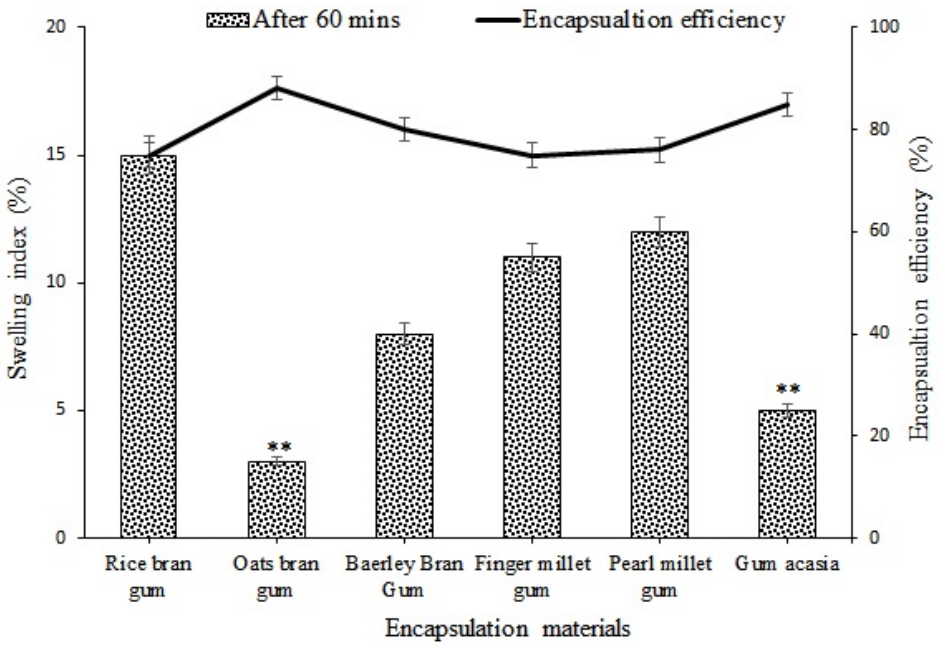
After 60 mins
Encapsualtion efficiency
Swelling index (%)
Encapsualtion efficiency (%)
20
15
10
5
0
100
80
60
40
20
0
**
**
Rice bran gum
Oats bran gum
Baerley Bran Gum
Finger millet gum
Pearl millet gum
Gum acasia
Encapsulation materials

Figure S2

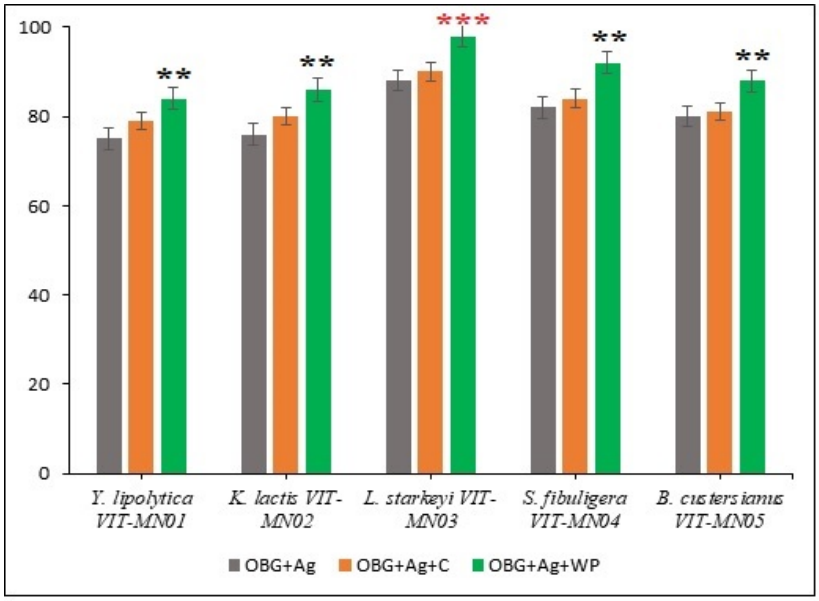
100
80
60
40
20
0
**
**
***
**
**
Y. lipolytica VIT-MN01
K. lactis VIT-MN02
L. starkeyi VIT-MN03
S. fibuligera VIT-MN04
B. custersianus VIT-MN05
OBG+Ag
OBG+Ag+C
OBG+Ag+WP

Figure S3

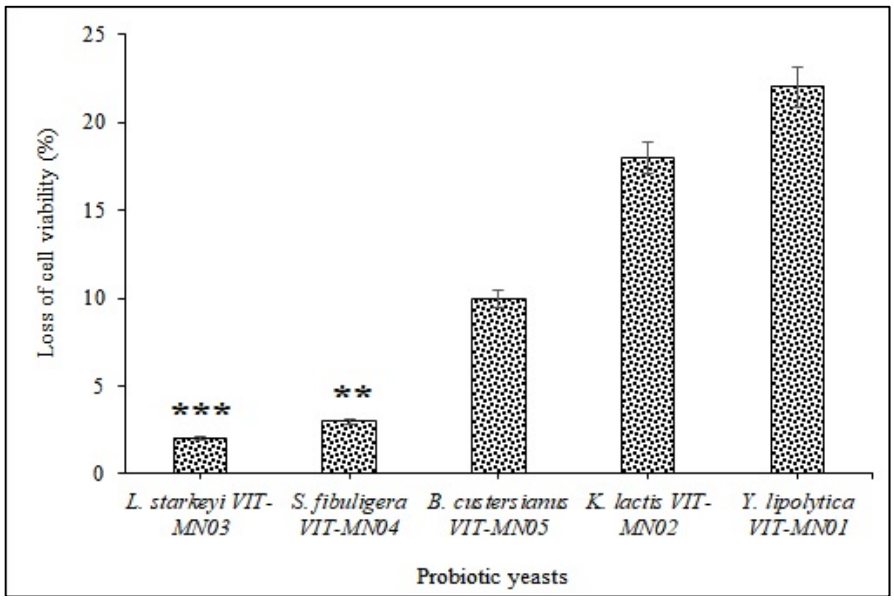
25
20
15
10
5
0
Loss of cell viability (%)
***
**
L. starkeyi VIT-MN03
S. fibuligera VIT-MN04
B. custersianus VIT-MN05
K. lactis VIT-MN02
Y. lipolytica VIT-MN01
Probiotic yeasts

Figure S4