Accepted Manuscript

Microencapsulation of *Bifidobacterium animalis* subsp. *lactis* INL1 using whey proteins and dextrans conjugates as wall materials

P.A. Loyeau, M.J. Spotti, N.L. Vanden Braber, Y.E. Rossi, M.A. Montenegro, G. Vinderola, C.R. Carrara

PII: S0268-005X(18)30381-3

DOI: 10.1016/j.foodhyd.2018.06.051

Reference: FOOHYD 4528

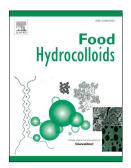
To appear in: Food Hydrocolloids

Received Date: 1 March 2018

Accepted Date: 29 June 2018

Please cite this article as: P.A. Loyeau, M.J. Spotti, N.L. Vanden Braber, Y.E. Rossi, M.A. Montenegro, G. Vinderola, C.R. Carrara, Microencapsulation of *Bifidobacterium animalis* subsp. *lactis* INL1 using whey proteins and dextrans conjugates as wall materials, *Food Hydrocolloids* (2018), doi: 10.1016/i.foodhyd.2018.06.051

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

1	Microencapsulation of Bifidobacterium animalis subsp. lactis INL1 using whey
2	proteins and dextrans conjugates as wall materials
3	
4	Loyeau ¹ , P.A.; Spotti ¹ , M.J.; Vanden Braber ² , N.L.; Rossi ² , Y.E.; Montenegro ² ,
5	M.A.; Vinderola ³ , G., and Carrara ¹ , C.R
6	
7	¹ Área de estudios Fisicoquímicos de Alimentos, Instituto de Tecnología de Alimentos
8	(ITA), Facultad de Ingeniería Química, Universidad Nacional del Litoral. Santa Fe,
9	Argentina.
10	² Centro de Investigaciones y Transferencia de Villa María (CIT), Universidad
11	Nacional de Villa María - CONICET. Córdoba, Argentina.
12	³ Instituto de Lactología Industrial (INLAIN), Universidad Nacional del Litoral -
13	CONICET. Santa Fe, Argentina.
14	e-mail: loyeau.p@gmail.com
15	
16	ABSTRACT
17	The incorporation of probiotic bacteria to food products is restricted by their
18	instability, so microencapsulation could provide them better protection during storage
19	and gastrointestinal digestion. In this study Bifidobacterium animalis subsp. lactis INL1
20	was microencapsulated by spray drying using whey proteins isolate (WPI) and dextrans
21	(DX of 6, 70 and 450 kDa) conjugates obtained by Maillard reaction as wall materials.
22	The stability during storage time and temperature, the viability after simulated
23	gastrointestinal digestion and the antioxidant capacity of the microcapsules were
24	assayed. The cell viability was negatively affected by the gastrointestinal digestion and
25	also over the storage time (12 months). Conjugate with DX 6 kDa was the most stable

Download English Version:

https://daneshyari.com/en/article/6985310

Download Persian Version:

https://daneshyari.com/article/6985310

<u>Daneshyari.com</u>