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High pressures homogenization (HPH) to microencapsulate *L. salivarius* spp. *salivarius* in mandarin juice. Probiotic survival and in vitro digestion

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15 **1. Introduction**

16 The importance of the microbiome in the incidence of a large number of diseases becomes
17 evident; from infectious diseases to degenerative diseases, including cancer, obesity and even
18 psychological diseases (Avershina et al., 2017; Auderson et al., 2017; Subramanyan et al, 2017;
19 Rouxinol – Dias, 2016). Together with this, it has been demonstrated that food can influence
20 growth, viability and survival of microorganisms in gastrointestinal tract thus conditioning the
21 human organism microbiota and therefore recommending probiotic food consumption (Kashtanova
22 et al., 2016).

23 Dairy products are more suited to probiotic food development. However, due to the high
24 prevalence of lactose intolerance, different non-dairy probiotic products such as fruit juices, cereal
25 based breakfast products and baby foods have been developed in recent years (Anekella & Orsat,
26 2013; Chen & Mustapha, 2012; Rivera-Espinoza & Gallardo-Navarro, 2010). In any case, there is a

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