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(57) Abstract :

A METHOD OF ENCAPSULATING NISIN IN SODIUM ALGINATE AND GUM ARABIC NANOCARRIER FOR USE IN COLON CANCER TREATMENT AND A PHARMACEUTICAL COMPOSITION THEREOF ABSTRACT 5 A method (1200) of encapsulating nisin in sodium alginate and gum arabic nanocarrier for colon cancer treatment and pharmaceutical composition of the same is provided. The method (1200) includes dissolving (1202) 7 mg/ml of sodium alginate and gum arabic in deionized water to form a solution and stirring the solution for 10 minutes at 1000 rpm, adding (1204) 1 10 mg/ml nisin to the solution to form a mixture and stirring the mixture for 30 minutes, adding (1206) a plurality of surfactants at 0.1% to the mixture, stirring the mixture for 10 minutes, adding (1208) 10% cross-linker CaCl₂ to the mixture and stirring the mixture for 2 hours, centrifuging (1210) the mixture at 15000 rpm for 15 minutes and lyophilizing the pellet obtained from the centrifugation to form a lyophilized nisin nanoparticle in a stable form and 15 storing (1212) the lyophilized nisin nanoparticle. [FIG. 1A]

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