

Abstract

Poly γ -glutamic acid (γ -PGA) is a water-soluble, anionic, biodegradable, and edible biopolymer produced by many *Bacillus* species especially *Bacillus subtilis*. Screening of *Bacillus* species was performed by neutral red assay. γ -PGA amount was estimated in the supernatant of *Bacillus* spp. when glutamic acid independent fermentation medium was used. Glucose plays an important role in the production of γ -PGA. For the rapid identification of γ -PGA, copper sulfate and paper chromatography was used. γ -PGA production was optimized at 37°C, 48 hours of incubation period, 2% inoculum size, 24 hours old inoculum, 2% glucose concentration. γ -PGA was purified by ethanol precipitation method. The molecular weight was estimated to be 140 kDa.