

E343 **Spore Formation by Submerged Culture of De-emulsifying Active *Streptomyces* sp. Strain 8321**

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An *Streptomyces* strain was isolated from the Antarctica. The *Streptomyces* sp. strain 8321 showed production of submerged spores at 25°C and 150 rpm in following liquid media: Bennett's, YED (glucose 1 g/l, yeast extract 1g/l, pH 7.0), and MM (glucose 1g, KH₂PO₄ 2g, K₂HPO₄ 7g, (NH₄)₂SO₄ 1g, sodium citrate 0.5 g, MgSO₄·7H₂O 0.1g, per liter, pH 7.0). The submerged spores obtained from these broth media did not exhibited de-emulsifying ability, while the spores of the strain grown on a Bennett's agar plate showed de-emulsifying activity toward to oil-in-water emulsion.

E344 **Fermentations of Chunggugjang and Soy-Sauce by *Bacillus licheniformis* B1**

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Bacillus licheniformis B1 secreting a strong protease and amylase was isolated in nature, and characterized previously. Whether or not the strain allows Chunggugjang and Soy-Sauce fermentation was determined in this study. In Chunggugjang fermentation, browning increased from 1.4 to 13 at 390 nm, and from 2.4 to 5.8 at 500 nm. In Soy-Sauce fermentation, browning increased from 0.5 to 1.2 at 500 nm. In Chunggugjang, pH change occurred from 6.4 to 7.6. However, in Soy-Sauce, pH was constant at 8.4. Protease activity in Chunggugjang fermentation appeared on the 2nd day of inoculation, and was maximum on the 3rd day. In Soy-Sauce fermentation, protease activity was maximum 1 d after inoculation. Nucleic acids with high molecular weight in stable forms was also detected in Soy-Sauce. It is proved that *B. licheniformis* B1 can do Chunggugjang and Soy-Sauce fermentations successfully and consecutively. Many bioactive ingredients are expected.