

P27

**Study on Production of Poly (γ -glutamic acid)
by *Bacillus subtilis* CH-10**

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A bacterium that produced a large amount of poly- γ -glutamate (PGA) was isolated from the compost and designated as *Bacillus subtilis* CH-10. The optimum temperature and pH for PGA production were at 37°C and 7.5, respectively. The maximum amount of PGA production (18.84 mg/ml) was obtained when it was grown in a medium containing 3% L-glutamate and 5% sucrose at 37°C with shaking. The result that the L-glutamate significantly induced PGA production indicates that it produces a PGA by the glutamate dependent manner. Some properties of the PGA obtained at different times of cultivation were investigated by SDS-PAGE and ninhydrin analysis. The PGA production was elongated along with cultivation time and maximum amount was achieved at 96 h. Average molecular weight of PGA was estimated to be 1100 kDa by FDNB method.