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## Isolation and Characterization of thermophilic collagenase from *Bacillus* sp. JS-17

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Collagen and its digests have been widely used in protein-based industries for solidifying and emulsifying biopolymers. These polymers are also used in medical and chemical industries to produce skin substitutes, surgical threads and pharmacological capsules as well as photographic coating. For the strain screening, total 78 thermophilic collagenase-producing bacterial strains were isolated from kimchi. Among the 78 isolates, strain 17 with the highest activity and thermostability has been selected for the next experiments. The collagenases are produced extracellularly. Collagenolytic activity was assayed by the Ninhydrin procedure of Rosen. The bacterium was identified as *Bacillus* sp. JS-17 by partial 16S rDNA sequence alignments. The optimal conditions for the maximal collagenase activity by JS-17 were evaluated in the basal medium containing 1.5% fructose, 0.4% polypeptone, 0.4% yeast extract, 0.5% K<sub>2</sub>HPO<sub>4</sub>, 0.4% KH<sub>2</sub>PO<sub>4</sub>, 0.1% CaCl<sub>2</sub>, 0.1% citrate, 0.01% MgSO<sub>4</sub> · 2H<sub>2</sub>O and 0.01% MnSO<sub>4</sub> · 4H<sub>2</sub>O with initial pH 7.0. The strain was cultured at 30°C for 2 days with reciprocal shaking.