

Optimization of Medium Composition for Protease Production by *Enterobacteriaceae* sp. PAMC 25617 by Response Surface Methodology

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This study was conducted to investigate the optimum culture condition for protease production by *Enterobacteriaceae* sp. In previous studies, Yeast extract, and TritonX-100 were identified as the significant factors affecting protease from one-factor-at-a-time method. The medium composition for cold-adaptive protease production of *Enterobacteriaceae* sp. was optimized by response surface methodology (RSM). RSM studies for optimizing protease production of *Enterobacteriaceae* sp. have been carried out for three parameters including yeast extract concentration, TritonX-100 concentration, and culture pH. These significant factors were optimized as 6.690 g/L yeast extract, 0.018 g/L TritonTM X-100, and pH 6.677. The experimentally obtained protease activity was 8.03 U/L, and it became 1.5-fold increase before optimization.