

The control of Poly-(3-Hydroxybutyrate-co-3-Hydroxyvalerate) content
by Recombinant *Escherichia coli*

박상우, 심상준*
성균관대학교

(simsj@yurim.skku.ac.kr*)

The biodegradable polymer polyhydroxyalkanoates (PHAs) are carbon storage polymer accumulated by a variety of bacteria in response to nutrient limitation. PHAs show thermoplastic or elastic properties depending on the polymer composition. A novel PHB [Poly-(3-Hydroxybutyrate)] is the best known candidate of the PHAs group. But, the copolymer of Poly-(3-Hydroxybutyrate-co-3-Hydroxyvalerate) has been of particular interest because it has more flexibility material properties than the P(3HB) homopolymer.

In this study, Recombinant *Escherichia coli* harboring the *Alcaligenes eutrophus* polyhydroxyalkanoate (PHA) biosynthesis genes were constructed were examined for their ability to control Poly-(3-Hydroxybutyrate-co-3-Hydroxyvalerate) [P(3HB-co-3HV)] copolymer contents from propionate, and IPTG (Isopropyl- β -D-thiogalactoside).