Z. mobilis was also purified by the same procedures. The two enzyme preparations were characterized and compared. It was found that the *E. coli* ADH was identical to one of two ADH isozymes of *Z. mobilis*. Analytical gel filtrations led to the conclusion that the molecule of *E.coli* ADH was composed of four subunits having molecular weight of 40,000 (+1,000) dalton each. The effect of metal ions on ADH activity and optimum pH were investigated.

Brevibacterium ammoniagense 융합균주의 GMP 생성

김동만* · 임번삼 · 전문진
고려대학교 농과대학 농화학과

5′-Xanthylic acid 생성균주인 *Brevibacterium ammoniagenes* ATCC 21263 R에 XMP에서 GMP로의 전환효소인 GMP synthetase 활성을 부여하기 위해 동종간 세포융합을 시도하여 융합균주들을 얻었다. 이들 우량 융합균주들과 융합모균의 GMP synthetase 활성을 측정하여 상호 비교하였으며, pH 변화에 따른 GMP synthetase 활성과 GMP 생성량과의 관계를 검토하였다. 또한 최적 pH에서 균성장에 따른 당소모량과 GMP 생성량을 비교하였다.

Physiological and Nutritional Factors for Efficient Sporulation and Toxin Formation in *Bacillus tthuringiensis*

이은희* · 반재구 · 김정일
Genetic Eng. Center, KAIST.

In order to optimally induce sporulation and toxin formation in *Bacillus thuringiensis*, exhaustion of specific nutrients as well as resuspension experiments were tried. Sporulation and toxin formation was most abunduntly occurred when the growth was limited by carbon source. It was also occurred in a resuspension medium containing only distilled water. Various environmental and physiological factors affecting the efficiencies of spore and toxin formation were examined in chemically defined media. As a result of these studies, a batch fermentation resulted in higher spore and toxin yield than ever reported.

Isolation, Identification and Chitinolytic Properties of *Aeromonas hydrophila*

Kwang Yup Kim*, Ke Ho Lee.
Department of Foos sci. & Tech.
College of Agricu lture, S.N.U.

A Screening test was carried out for chitin-decomposing bacteria. In 100 samples from