

E327 Two fibrinolytic proteases in *Pleurotus sajorcaju*

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Fibrinolytic protease activity was detected from crude extract of the fruit body of *Pleurotus sajorcaju* using fibrin plate method. Two fibrinolytic activities were found at the position of 14,500 dalton and 86,000 dalton by gel filtration column chromatography. Higher M.W. protease was 42,000 dalton in SDS-PAGE, indicating that it is a dimer. Higher M.W. protease was alkaline proease with optimum pH range of 8.0-8.5, whereas lower one was neutral protease with that of 7.0-7.5. Both were inhibited by phenanthroline and EDTA, suggesting that they are metalloproteases. Inactivated enzyme activities were restored by addition of Co^{2+} or Zn^{2+} . Iodoacetate inhibited higher one, but not lower one. Both enzymes cleaved B_β and γ chain of human fibrinogen. There were no substrate activity in azocasein, but reacted with azoalbumin. The activities with various nitroaniline compounds were different. High M.W. protease has a preference for hydrophobic and bulky residue, whereas lower one for positively charged residues.

E328 토양에서 분리한 고온성 황산환원세균을 이용한 dibenzothiophene (DBT)을 포함한 석유의 생물학적 탈황

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DBT를 유일 유황원이나 최종 전자수용체로 사용하는 고온성 황산환원 세균을 여러 토양시료로부터 농화배양을 통하여 분리하였다. 분리된 균주를 이용하여 DBT 평판배지에서 배양할 때 검은 집락이 형성됨을 확인할 수 있었다. 또한 원유를 포함하는 유기황화합물의 탈황을 황분석기(sulfur analyser)와 GC-FID 또는 GC-FPD로 분석한 결과 유의한 결과를 얻을 수 있었다. 이러한 결과를 통하여 새로운 고온성 황산환원세균이 선택되어 DBT 평판배지에서 유지되고 있음을 확인할 수 있었다.