

## A Study on the the Electrospinning Process of Polyvinylacetate (PVAc) in Acetone Solvent

박주영, 김맹수, 황철호<sup>1</sup>, 이인화\*  
조선대학교 환경공학과 BK21 바이오가스기반 수소생산  
전문인력양성사업팀; <sup>1</sup>조선대학교 환경공학과  
(ihlee@chosun.ac.kr\*)

In order to prepared ultrafine fiber by electrospinning method from polyvinylacetate(PVAc) fiber. PVAc dissolved in acetone solvent were electrospun at various conditions. The PVAc solution of various concentrations(10~25wt%) were applied under different voltage (10~20kV), flow rate(50~100 $\mu$ l/min), and tip-to collector distances(7.5~20cm). For the concentration lower than 15wt%, bead fiber were formed partially. As the concentration of spinning solution increased, the viscosity of PVAc solution increased linearly from 12cP to 228cP. The diameter of electrospun PVAc fiber change from approximately 300nm to 2500nm depends on the flow rate 100 $\mu$ l/min, applied voltage 12.5kV and TCD 10cm. Over the 15kV applied voltage, the fiber diameter increased. Because it seem to be not fully developed Taylor corn, owe to charge acceleration increased rapidly. In the case of 20wt% PVAc, we obtained ultrafine electrospun PVAc fiber having approximately 1300nm diameter under flow rate 100 $\mu$ l/min, applied voltage 12.5kV and TCD 10cm.