# Measurement of Extensional Viscosity of Boger Fluids Using the Spinline Extensional Rheometer

박원순, 이주성, 정현욱*, 현재천
고려대학교 화공생명공학과
(hwjung@grtrkr.korea.ac.kr*)

Extensional properties of polymer solutions, which include strain hardening, extensional viscosity, Hencky strain, and so on, play a key role on their microstructural formations and physical properties in complex flows, i.e., coating processes. In this study, spinline extensional rheometer has been devised and tested to measure extensional properties of polymer solutions of glycerine and ethylene glycol with polyacrylamide (PAAm) or polyethyleneoxide (PEO) known as Boger fluids. It has been found that their apparent extensional viscosities by the spinline rheometer well agree with those obtained by CaBER (capillary break-up extensional rheometer). These properties will be useful to analyze the coating beads within coating flows exhibiting high shear/extensional rates and to establish the coating windows.