

Effect of Rheological Properties on the Yield Value in an Aqueous Polymer solution

박승환*

(주)아모레퍼시픽 기술연구원 화장품연구소

(kai8099@naver.com*)

An aim of this study is to study the correlation between rheological properties and yield value in low viscosity polymer aqueous solution. Rheological properties of aqueous polymer solutions were controlled by Synthetic polymer and natural polymer(carbomer, Sodium Polyacrylate, Acrylates.C10-30 Alkyl Acrylate Crosspolymer, hydroxyethyl acrylate.sodium acryloyldimethyl taurate copolymer, Ammonium Acryloyldimethyltaurate·VP Copolymer, Cellulose Gum and Xanthan Gum). Small amount of carbomer solution had the highest viscosity and yield value of sodium polyacrylate was higher than that of carbomer solution in the same viscosity. Each aqueous polymer solution was tested and the results showed that as viscosity and yield stress increased, the sedimentation ratio of capsules decreased. The viscoelasticity data also showed the same tendency in a shear stress range. It was assumed that the characteristics of polymer structure and interaction between polymer caused this phenomena.