

Influence of Wetting Material Containing Hydroxypropyl Methylcellulose on Physical Properties of hydrogel Ophthalmic lens

조선아, 이민제, 성아영*
세한대학교
(say123sg@hanmail.net*)

Hydroxypropyl methylcellulose is one of the general materials used for wetting material in artificial tear. The impacts of wetting solution including hydroxypropyl methylcellulose on the hydrogel ophthalmic lens were analyzed in various conditions. The cross-linking agent, EGDMA(ethylene glycol dimethacrylate) and HEMA(2-hydroxyethyl methacrylate) were used as the basic combination to produce a hydrogel ophthalmic lens. Also, NVP (n-vinyl-2-pyrrolidone) and MMA (methyl methacrylate) were added to this combination for classification of water content. The Measurement of the physical properties showed that water content, refractive index, visible ray transmittance and contact angle were in the range of 27.64%~48.33%, 1.424~1.453, 82.0%~92.0% and 39.47°~51.52°, respectively. In addition, for the physical property measured after soaking into wetting solution, the water content, refractive index and contact angle were in the range of 25.86%~48.26%, 1.424~1.456, 76.0%~92.0% and 26.55° ~ 49.63°, respectively. The changes of the physical property depending on hydration time showed the increase of refractive index, decrease of contact angle.