

<b>Project</b>	The study of forming and properties of hydrogel fibers
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### Abstract

This research studied of the forming and properties of hydrogel fibers. The objectives were to study the forming of the hydrogel fibers mixed with bromothymol blue and methyl red indicator and to study the properties of the hydrogel fibers. The hydrogel fibers was synthesized from the polymerization reaction between 2-hydroxyethyl methacrylate and diallyldimethyl ammonium chloride by using potassium per sulfate as initiator, N,N,N',N' -tetratetramethylethylenediamine as accelerator and N,N'-methylenebisacrylamide as a cross-linked.

The results showed that the hydrogel fibers mixed with bromothymol blue indicator had the color change property better than methyl red indicator. The 2-hydroxy ethyl methacrylate hydrogel fibers mixed with diallyldimethyl ammonium chloride had the water absorption property, elongation and recovery from blending better than unmodified one. The factor effecting the properties of the fibers was the diallyldimethyl ammonium chloride content.

**Keywords** hydrogel, methyl red indicator, bromothymol blue Indicator,  
Diallyldimethyl ammonium chloride