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## ADSORPTION OF PHENOL WITH THE GRAFTED POLYMER OF P(MMA-MAH)- PEGME IN AQUEOUS SOLUTION

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### Abstract

The grafted polymer of P(MMA-MAh)- PEGME synthesized was used as adsorbent to remove phenol in aqueous solution. Through the adsorption research of phenol, it was found the removal percentage (%) of phenol was promising when pH was less than 6. With the adsorbent dose increasing, the removal percentage increased, meanwhile the adsorption amount  $q_e$  ( $\text{mg}\cdot\text{g}^{-1}$ ) correspondingly decreased. It was taken 35h for the phenol adsorption with the grafted polymer to reach the equilibrium. The study results indicated that the adsorption process was carried out spontaneously; the process was exothermic in nature; the adsorption kinetic of phenol belonged to the Lagergren relation; the adsorption mechanism was well represented with Freundlich isotherm model.

*Key words:* adsorption kinetic, adsorption isotherm, grafted polymer, phenol

*Received:* August, 2012; *Revised final:* January, 2013; *Accepted:* February, 2013

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