

## Adsorption Isotherms of Catechin Compounds on Quercetin-MIP

김은철, 노경호\*  
인하대학교  
(rowkho@inha.ac.kr\*)

A molecular imprinted polymer (MIP) using quercetin as the template and methacrylic acid (MAA) as the functional monomer was prepared. Acetonitrile was used as the porogen with ethylene glycol dimethacrylate (EGDMA) as the crosslinker and 2, 2'-azobis(isobutyronitrile) (AIBN) as the initiator. By a linear and nonlinear regression analysis, the experimental parameters in the equilibrium isotherms were estimated. Then, the linear and quadratic equations for concentration and sorbents to adsorption amounts were expressed, and the adsorption equilibrium data were also correlated into the Langmuir, Freundlich and Radke-Prausnitz isotherm models. The adsorption amounts of quercetin, + C and EC on quercetin molecular imprinted polymer were compared. The results showed that the quercetin imprinted polymer showed extraordinarily higher adsorption ability for quercetin than another two catechin compounds.