Competitive Adsorption Behavior of L-Ribose and L-Arabinose in Ligand-Exclusion Chromatography Using Single-Step Frontal Analysis

김진일, 이주원, 김정근[1], 구윤모*
인하대학교; [1]인하대학교 초정밀생물분리기술연구센터
(ymkoo@inha.ac.kr*)

L-ribose is a good starting material for the synthesis of medical drug and it is produced from L-arabinose by several steps of catalytic or bioconversion reaction. In the previous report, competitive Langmuir model had been adopted and described the adsorption behavior of L-sugars in ligand-exclusion chromatography for the isolation of L-ribose from L-arabinose. In the simulation using competitive Langmuir model, the elution curve of L-ribose after that of L-arabinose had not been, however, described sufficiently. Accordingly, additional single-step frontal analysis of L-sugar mixture was performed for the estimation of more practical adsorption behavior in this study.