

## Evaluation of the Effects of Solvent System on the Increased Surface Area Precipitation Process for the Purification of Paclitaxel

전유림, 김진현\*

공주대학교

(jinhyun@kongju.ac.kr\*)

In this study, we evaluated the effects of solvent system on the increased surface area precipitation process for the purification of paclitaxel from plant cell cultures of *Taxus chinensis*. The purity of paclitaxel after 24 hr of acetone/pentane precipitation was 54.0% when there was no surface area increase, while it was 77.7% when the surface area was increased by the use of anion exchange resin (Amberlite IRA-400OH). The purity of the precipitate was relatively higher, presumably because a considerable portion of the impurities as well as paclitaxel was adsorbed to the ion exchange resin. However, the yield of paclitaxel decreased when Amberlite IRA-400OH was used. Compared with the case where no surface area increasing agent was employed, the addition of Amberlite IRA-400OH as a surface area increasing agent resulted in a considerable decrease in the size of the paclitaxel precipitate. These results are in contrast with the results of the methanol/water precipitation process. From these results, it was found that the precipitation behavior varies considerably depending on the use of the solvent system (methane/water or acetone/pentane).