

A Tandem Water and Hexane Washing Process for the Purification of Paclitaxel from *Taxus chinensis*

이명기, 김진현[†]

공주대학교

(jinhyun@kongju.ac.kr[†])

Abstract

In this study, a water pre-treatment method for the separation and purification of an anticancer agent paclitaxel from plant cell cultures was developed. When the methanol extract obtained by biomass extraction was pre-treated with water, a high yield of high-purity paclitaxel was observed within a short period of time. The main process parameters (crude extract/water ratio, pretreatment time) in the water pretreatment process were optimized. In addition, the impurity removal behavior was quantitatively investigated through high-performance liquid chromatography analysis. Thus, the efficiency of the separation and purification process for paclitaxel was improved dramatically by water pretreatment, particularly in terms of the reduction of operating times and the simplification of processes.

Key words: Paclitaxel; Water pretreatment; Purification; Process; Development