Optimal Conditions for Adsorbent Treatment in The Separation and Purification of Paclitaxel from Plant Cell Cultures of *Taxus chinensis*

이충기, 김진현*
공주대학교
(jinhyun@kongju.ac.kr*)

Biomass-derived tar and waxy compounds have a highly negative effect on the separation and purification of paclitaxel and should be removed prior to final purification. Adsorbent treatment is a simple, efficient method for removal of tar and waxy compounds from plant cell cultures. In this study, we optimized the important process parameters (solvent type, ratio, adsorption time and temperature) of adsorbent treatment to remove the tar and waxy compounds in a pre-purification step. Using the adsorbent, sylopute, we determined differences in the effectiveness of the adsorbent treatment according to changes in the solvent type, ratio (crude extract : adsorbent), adsorption time and temperature. This effect could also be confirmed by HPLC analysis of the adsorbent after treatment. In adsorbent treatment step, the purity seemed to show a small improvement but this treatment had a significant effect on convenient and feasibility of following steps by removing of tar and waxy compounds. Acknowledgement: This work was supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government (MEST) (No. 2011-0010907).