

Removal of tar compounds in plant cell cultures of *Taxus chinensis* using adsorbent treatment process for the purification of paclitaxel

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Biomass-derived tar compounds have a highly negative effect on the separation and purification of paclitaxel and should be removed prior to final HPLC purification. The major tar compounds in biomass were 2-picoline, 2,5-xyleneol, acenaphthene, 1-methylnaphthalene, and o-xylene. In this study, we investigated the effects of adsorbents on the removal of tar compounds during the pre-purification of paclitaxel from plant cell cultures. Using the synthetic adsorbents sylopute, active clay, HP_2O , and SiO_2 , we performed adsorbent treatment and analyzed the paclitaxel precipitates recovered from hexane precipitation. We also determined differences in the effectiveness of the adsorbent treatment according to changes in the surface area, pore volume and pore diameter of SiO_2 .