

Removal of tar compounds from plant cell cultures of *Taxus chinensis* using an adsorbent treatment process

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Plant-derived tar compounds have a highly negative effect on the separation and purification of paclitaxel and should be removed prior to final 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, HP20, and SiO₂, 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 SiO₂.