

Identification of Tar Compounds and Effect of these Compounds on the Purification Efficiency of Paclitaxel from Plant Cell Cultures of *Taxus chinensis*

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In this study, the tar compounds derived from the plant cell cultures of *Taxus chinensis* were first identified and quantified via gas chromatography/mass spectrometry (GC/MS) and gas chromatography (GC). 2-Picoline, 2,5-Xylenol, Acenaphthene, 1-Methylnaphthalene and o-Xylene were found as major main tar components in biomass. These compounds were identified and confirmed by comparing their retention times with those of authentic compounds. Each compound also spiked with pure standard. The contents of 2-Picoline, 2,5-Xylenol, Acenaphthene, 1-Methylnaphthalene, and o-Xylene in biomass were 0.251, 0.159, 0.124, 0.094 wt% and 0.053 wt%, respectively. In liquid-liquid extraction, adsorbent treatment tar was removed 41.6, 89.1%, respectively. After hexane precipitation, all of tars were successfully removed. **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).