Analysis of tar compounds and evaluation of effect of these compounds on the purification process of paclitaxel from *Taxus chinensis*

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

In this study, the tar compounds derived from the plant cell cultures of *Taxus chinensis* were first identified and quantified via GC/MS and 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. The tar compounds had an adverse effect on the purifying process in increasing order of 1-methylnaphthalene, o-xylene< acenaphthene<2-picoline<2,5-xylenol. 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).