

Identification and quantification of tar compounds in the purification process 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 GC/MS (gas chromatography/mass spectrometry) and GC (gas chromatography). 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 41.62, 89.10%, respectively. After hexane precipitation, all of tars were successfully removed.