Improved acetone/water fractional precipitation process for purification of paclitaxel

김태완, 김진현[1,†]
공주대학교; [1]공주대학교 화학공학부
(jinhyun@kongju.ac.kr[†])

This study investigated the efficiency of acetone/water fractional precipitation. When acetone/water ratio was 40/60, 30/70, 20/80, and 10/90 (v/v), the yield of paclitaxel was 54.3, 89.1, 95.5, and 97.6%, respectively. The yield of paclitaxel increased with increasing acetone/water ratio. Also, when adding distilled water until acetone/water ratio was 40/60 (v/v), follwed by mixing for 10 min was performed at low temperature (4℃), the high yield (~87.9%) of paclitaxel was obtained immediately. However, when the same method was performed at room temperature, the low yield (~54.3%) of paclitaxel was obtained compared to the addition of distilled water at low temperature (4℃) and after additional mixing at room temperature for 2 hr, the yield (~86%) of paclitaxel was achieved that was equivalent to the result (~87.9%) when method was conducted at low temperature (4℃). Acknowledgement This research was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (Grant Number: 2015016271).