

Removal of residual ionic liquid from paclitaxel extract by treatment with water

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When using an ionic liquid (1-butyl-3-methylimidazolium tetrafluoroborate, [Bmim] BF₄) as co-solvent, the extraction efficiency of anticancer agent paclitaxel from biomass was dramatically improved. However, the residual ionic liquid had a significant negative effect on convenient and feasibility of following concentration and drying steps. In this study, a novel method was developed for the effective removal of the residual ionic liquid in biomass extract. The residual ionic liquid was easily and conveniently removed by drying after treatment of a sample recovered by biomass extraction with water. Furthermore, the operation methods (sonication- or microwave-assisted operation) and major parameters (amount of water, stirrer speed and treatment time) of water treatment process were also investigated. Acknowledgment 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).