

## **Pre-purification of paclitaxel by micelle and precipitation process development**

Keum-Young Jeon and Jin-Hyun Kim<sup>1</sup>

Department of Chemical Engineering, Kongju National University,

Kongju 314-701, Korea,

Tel : 041-850-8642, Fax : 041-858-2575

E-mail : jinhyun@kongju.ac.kr

### **Abstract**

The approach taken in this work was to transfer paclitaxel in the crude extract to an aqueous surfactant solution as a micelle, allowing organic solvents to be used for removal of lipids and non-polar impurities. CPC (N-cetylpyridinium chloride) was chosen as the surfactant for this process on the basis of the high solubility of paclitaxel in aqueous solutions of this surfactant and the low solubility of this surfactant in organic solvents. The use of micelle and precipitation in the pre-purification process allows for rapid and efficient separation of paclitaxel from interfering compounds and dramatically increases the yield and purity of crude paclitaxel for HPLC purification steps compared to alternative processes. This pre-purification process serves to minimize solvent usage, and the size and complexity of the high-performance liquid chromatography (HPLC) operation required for paclitaxel purification.

### **References**

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