Separation of Camptothecin and 10-Hydroxycamptothecin from Camptotheca acuminate Decne and Nothapadytes foetida (Wight)

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ABSTRACT

Camptothecin (CPT) is a compound isolated by Wall ’ s and others in 1966 from Camptotheca acuminate Decne. The derivatives of anti-cancer drugs camptothecin are products that have high economical. They are work on adenocarcinomas, prostate cancer, lung adenocarcinoma, ovary cancer, cervix cancer, AIDS, else. Camptothecin become the main anti-cancer drugs in the world. To extract camptothecin and 10-hydroxycamptothecin (10-OH-CPT), the traditional method usually waste time and solvent. The goals of this research is to find the best extraction method for obtaining camptothecin and 10-hydroxycamptothecin from Camptotheca acuminate Decne and Nothapadytes foetida (Wight) Sleum by using microwave-assisted extraction (MAE), ultrasonic-assisted extraction (UAE). Using high porous type resins HP-20, YPW-2, and HPA25 to separate camptothecin and 10-hydroxycamptothecin. The results showed high porous type resin YPW-2 had the best separation and purification effect.

Keywords : Camptothecin ; Microwave-assisted extraction ; Ultrasonic-assisted extraction ; Heating reflux- assisted extraction ; Separation ; Purification ; High porous type resins

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