

Increase of epothilone production using *Sorangium cellulosum* through media design and its separation with Amberlite resins

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Fermentation media with different initial concentration of potato starch, trace elements, lactose, glycerol, and methyl-oleate were used to study effects on cell growth, production epothilones, and ratio of epothilones. Growth and epothilones production increased as the potato starch concentration increased. Metal ions also enhanced epothilones production as shown in the previous literatures. In cases of lactose and glycerol, production of total epothilones and epothilone A increased depending on concentration of lactose and glycerol concentration, while different trends were observed on epothilone B. The effect of optimized factors of potato starch and trace elements was also investigated on epothilone production. Its strategy led us to about 8-fold increase in epothilones production compared to control condition. In case of methyl-oleate, we tested epothilones production in E medium without skim milk. We known that *S. Cellulosum* So ce90 may be to metabolite of fatty acid and also increased epothilone production. Finally, We resulted that XAD-1600 resin led us to about 40 % increase in epothilone separation compared to control condition.