# Morphogenesis, fermentation and active ingredient analysis of Cordyceps spp. for functional foods.

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**ABSTRACT**

The object of the research is the differences about the morphology development of C. sinensis cultured in the different medium. In the different cultured situation among the selected species of the C. memorabilis, C. militaris, C. sinensis, establishes the basic information about the species in the artifical cultures, for qualifing the industrial species by the API-ZYM kit. By the different liquid fermentation culture of C. sinensis and C. militaris , mycelium and fermentation supernatant could be detected and analyzed by HPLC as Adenosine, Cordycepin and N-2-hydroxyethyl adenosine. There are obviously different in the morphology in the different culture situations, in the API-ZYM kit system obey repeatedly produced the same enzymes, including phosphatase alcaline, Esterase, Esterase lipase, Leucine arylamidase, phosphatase acid, Naphthol-AS-BI-phosphohydrolse, and N- acetyl- β -glucosa- minidase. It would be found that C. militaris cultured in the sumberged YM broth produced cordycepin best, over 880 ppm. The dry weight of mycelium and the quantity of cordycepin have correlation. We could get more high quantity of cordycepin in the sumberged culture than that in the shake culture; mycelium grown would be repressed in the submerged culture than that in the shake culture.

Keywords : Cordyceps spp. ; fermentation culture ; morphogenesis ; functional foods

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