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Separation of insect hormone precursors from plants

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In this paper, XAD-4 Column and Sep-Pak Cartridge are used in order to separate Phytoecdysone from plant extract. 20%, 33% and 70% of Methanol extract solution have been employed as Column extract solution. However, Phytoecdysone has been separated from only 70% solution. In the separated Phytoecdysone, its *R_f* band has been expressed as the value of 0.24 and then it has been identified as 20-hydroxyecdysone.

The Phytoecdysone band of *Achyranthes japonica* (MIQ) NAKAI was deeply revealed. On the other hand, *Taxus cuspidata* s et z's band was slightly expressed. Moreover, it was not able to find out Phytoecdysone from *Morus bombycis* koidz and *Equisetum arvense* L. From these results, it can be considered that *Achyranthes japonica* (MIQ) NAKAI products the most amount of Phytoecdysone among the above Plants.

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Influences of Glucose on the Growth and Biochemical Properties of Cyanobacteria, *Synechocystis* PCC 6803 in Culture

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Cyanobacteria, *Synechocystis* PCC 6803 (S. 6803) were cultured in BG11 media: Control medium(C) without glucose and Glucose medium (G5: glucose of 5 mM; G25: glucose of 25 mM). The growth rate(2.6/day) and exponential growth rate(1.0/day) of S. 6803 in G5 was the highest as well as the dry weight (54mg/10ml). In G5 and G25, the contents of chlorophyll *a* of S. 6803 were high (G5: 12 mg/g dry wt.; G25:17 mg/g dry wt.), while the total lipid was minimum (13 mg/g dry wt.) in G25 culture. The concentration of β -carotene in S. 6803 was the highest (64 μ g/g dry wt.) in G5. The components of fatty acids were C16:0, C16:1, C18:0, C18:1 C18:2, C18:3 γ and C18:3 α . The dominant fatty acids were palmitic and γ -linolenic acid. The percent of unsaturated acid was the highest (45%) in G5. Besides, the content of γ -linolenic acid was the highest (17%)in G5, while this acid was the lowest (6.9%) in C. In G5 medium, S. 6803 had a favorable condition to grow.