



ABSTRACT

It was evaluated the growth of *Azadirachta* cell suspension in different conditions of oxygen delivery in Erlenmeyer shake flask. Oxygen transfer rate (OTR, $\text{kg O}_2 \text{ m}^{-3} \text{ day}^{-1}$) for the closures utilized were: silicone foam (1.04), cotton (0.58), and aluminum foil (0.07). *A. indica* cells growing during 6 weeks of subculture showed that lower OTR reduced cell viability, the pH of broth medium, and *Azadirachtins* production. While, higher OTR induced the formation of aggregates. Using a stirred tank bioreactor, it was determined that *A. indica* cells had an oxygen consumption of $0.100 \text{ kg O}_2 \text{ kg CS}^{-1} \text{ day}^{-1}$, a higher value than other plant cell cultures. These results show that OTR generated in Erlenmeyer shake flasks is lower to oxygen uptake rate of *A. indica* cells and it is a limiting factor to grow this plant.

<http://rmiq.org/new%20page/eVol10No3.html>

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