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دراسات بيئية وفسيولوجية على طحلب اوسيلاتوريا المنتشر في محافظة الطائف

Document Language : Arabic

Abstract : Blue green algae were well known to produce hepatotoxic peptides and neurotoxic alkaloids. Planktonic Blue-green algae are an interesting group of organisms since they are capable of inhibiting developing mosquito's larvae. Thus, these organisms can be good source for biological control managements. Ekrema Dam Lake and Jabra valley water stream were selected for study locations. Genus Oscillatoria was purely isolated and identified. Sex isolates were selected for this investigation. Physical factors including temperature, light and cultivation method was examined. Optimal temperature was 30oC. Suitable light intensity was determined as 2000 lux, after testing four different intensity including sun light. Culture methods and agitated cultures results revealed that, shaking culture at speed 80-100rpm considered as favourable for investigated isolates rather than the other two methods. Media components, nitrogen sources, and pH as chemical factors was investigate their role in algal activity and growth. BG-11 and cyanophycean (C.M). Media was the best medium for growing blue-green algae. Nitrogen sources selection revealed that sodium nitrate was the best nitrogen source for selected isolates. Other four type of nitrogen sources show that Ammonium nitrate, and then Ammonium chloride considered being suitable for growth. Ammonium sulphate and Urea gave weak growth. Preferable pH for isolates growth revealed that optimal pH recorded was 7. Toxicity studies show that, culture of Oscillatoria sp effect the development of mosquito's larvae in low doses. Artemia was affected at high dose of culture. Neurotoxin produced by Oscillatoria sp effect the behavior of Barbus arabicus fishes. No death was occurred during 72 hours after exposure. Histopathological investigation show that fish liver has not being changed or affected by hepatotoxin.

Supervisor : أ . د . فهد بن عبدالرحمن الفاسي

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