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## Algal technology for sustainable urban wastewater treatment

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The purpose of the present study was to optimize the environmental and nutritional conditions for the isolate *Streptomyces* sp. MS-266 Dm4 to improve antibiotic production. The results showed that the highest antimicrobial activity were obtained after 7 days of growth under shaking conditions at initial pH 6 and temperature 30°C. Starch (2g/100ml) was found to be the most suitable carbon sole source for optimum growth and antibiotic productions. Peptone (0.04g/100ml) and NaNO<sub>3</sub> (0.2g/100ml) were found to be the most suitable nitrogen sole source for antibiotic productions and optimum growth, respectively. The effect of different concentration of mineral salts, were investigated. The maximum antibiotic production by *Streptomyces* sp. MS-266 Dm4 was obtained in a medium of the following composition (g/l): Soluble starch 2.0, peptone 0.04, K<sub>2</sub>HPO<sub>4</sub> 0.2, MgSO<sub>4</sub>·7H<sub>2</sub>O 0.15, KCl 0.05 and FeSO<sub>4</sub>·5 H<sub>2</sub>O traces, at pH 6.0 incubation period was seven days under shaking conditions.

### Biography

N Nirmalakhandan holds the Ed & Harold Foreman Endowed Professorship in Civil Engineering at New Mexico State University. His current research is in the area of algal systems for wastewater treatment and biofuel production. His research is funded by the National Science Foundation and the US Department of Energy. He has published more than 100 papers in ISI journals in the field of Environmental Engineering.

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