

NITRIFYING BACTERIA IN SCHIRMACHER OASIS, ANTARCTICA

R.K. Gupta, J.S. Singh, A.K. Kshyap

Pt. L.M.S. Government Post Graduate College, Rishikesh, Uttaranchal, India

ABSTRACT

Nitrification is a biological process during which nitrifying bacteria convert toxic ammonia to nitrate. The present study has shown the occurrence of nitrification process in Antarctica and further explored the relationship between the most probable number (MPN) of ammonium and nitrite oxidizers and the correlation between ammonia, nitrate and nitrite with *Nitrosomonas* and *Nitrobacter*. Nitrate, nitrite and ammonium was found in varied concentrations at the sampling sites of the Schirmacher Oasis, Antarctica. Linear regression analysis showed that the *Nitrosomonas* and *Nitrobacter* population increased with the increasing concentrations of nitrate, nitrite and ammonium. There was a positive correlation exist in between the concentrations of nitrate, nitrite and ammonia and *Nitrosomonas* and *Nitrobacter* population.