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CULTURE OF GREEN ALGAE ISOLATED FROM FRESH-WATER AREAS IN THE ANTARCTIC (ABSTRACT)

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Several strains of green algae were isolated from wet soil of the shore of Lake Miers. They were found to contain chlorophyll *a*, chlorophyll *b*, and carotenoids with absorption spectral analyses. Both the cells of strains 82A and 8213 are spherical, about 4 μm in diameter, having a single peripheral chloroplast, similar to the genus *Chlorella*. The cells of *Stichococcus bacillaris* (strains 8211 and 8212) are cylindrical, about 6 μm $\times$ 2 5 μm, which are often loosely connected. The chloroplast of this alga is a parietal folded plate covering a small portion of the wall. *S bacillaris* SO-24 and *Chlorella vulgaris* SO-26 were also found on the moss community and in the small stream near Syowa Station, respectively. They contain chlorophyll *a*, chlorophyll *b* and carotenoids. Strains 82A and 8212 grow at an optimum temperature of 20–25°C and 25°C, respectively, under a shaking culture at 4000 lux. Both strains could barely grow at 30°C, but not at 35°C. In a week-long culture only strain 82A could grow at the low temperature of 5°C. These algal strains seem to be adaptable to low temperatures, in comparison with that *C. pyrenoidosa* IAM C-28 isolated from a temperate area could grow well in a range from 10°C to 35°C under the same culture condition.

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