

A new system to analyse protist species diversity on board a space station

Yuuji TSUKII (Hosei University, Science Research Center)

SUMMARY

To develop an efficient system for detecting protist species within a space station, we examined samples collected from three localities under various culturing conditions. Some samples were cultured by dividing them over 24 small wells, while others were cultured in single large culture flasks. After about one month, the samples cultured in the 24 small wells had, on average, about three times more protist species than those cultured in the single large culture flasks. This suggests that the species-species interactions that occur within the large flasks inhibited the growth of some species and that the "subdividing" method (using the 24 wells) may be useful to increase the efficiency of detecting protist species in the environment of a space station. This research was supported by the "Ground-based Research Program for Space Utilization" promoted by the Japan Space Forum.