

SEASONAL CHANGES IN BACTERIA BIOMASS AND ACTIVITY AT AN ANTARCTIC COASTAL SITE.

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Few studies have examined annual changes in bacterial concentration and metabolism in Antarctic waters. We measured seasonal changes in environmental parameters, [³H]thymidine incorporation rates and used stains to determine concentrations of total, intact and metabolically active bacteria. Results showed bacterial biomass and production correlated with temperature, light and substrate availability but correlations were due to intact and active, not total bacteria. Furthermore, [³H]thymidine-derived rates of cell production could be sustained by the intact and/or active bacterial fraction. Discriminating physiological states of bacteria using stains is contentious, yet our results indicate much of the biomass and production is due to intact/active bacteria.