

ABSTRACT

RIKA SRI NURJANAH. 2025. **STUDY OF MICROALGAE DIVERSITY IN THE FRESH WATER OF GURANTENG VILLAGE, TASIKMALAYA DISTRICT AS A SOURCE OF BIOLOGY TEACHING MATERIALS.** Department of Biology Education. Faculty of Teacher Training and Education. Siliwangi University, Tasikmalaya.

Guranteng Village is one of the tourist villages in Tasikmalaya Regency and has a fairly high biodiversity. One of the organisms is microalgae. Microalgae can be used as an environmental bioindicator to measure the quality of a water body. This study aims to determine the diversity of microalgae found in the freshwater of Guranteng Village, Tasikmalaya Regency as a source of biology teaching materials. This research was conducted in November 2022. This study uses a quantitative approach with descriptive methods and survey techniques. Determination of the research station was carried out by purposive sampling, so that 3 research sampling locations were determined, namely location 1 in the Fish Pond, Location 2 in Well Water, and Location 3 in Embung Water. Locations 1 and 2 have 5 observation points, each water sample is taken from the middle of the pond and well, and location 3 has 3 observation points, namely the surface, middle and bottom of the embung. Environmental parameters measured include brightness, water color, temperature, oxygen solubility (DO) and acidity (pH). While the ecological indices used in this study are the species abundance index, the Shanon-We diversity index, and the Shanon-Weiner diversity index. species uniformity index and dominance index. The identification results were found to be distributed in 4 kingdoms, 6 phylum, 7 classes, 11 orders, 15 families, 19 genus, and 19 species. The microalgae abundance index at location 1 is 49.4 Ind/ml, location 2 is 6.2 Ind/ml, and location 3 is 27.7 Ind/ml. Overall, the diversity index value of all stations is 2.39 so that it is classified as a medium category or medium polluted water quality. The species uniformity index value is 0.90 so it is classified as a high category or uniformity between species is evenly distributed and the dominance index value is 0.12 so it is classified as a low category or there is no dominating species. The results of this study are in the form of a source of biological teaching materials contained in the form of a Booklet, which can be used for the College level in the Cryptogamae Botany course.

Keywords: Diversity, Microalgae, Freshwater, Biology Teaching Materials.