

Purification Capability of White Radish for Gaseous Ethyl Alcohol and Bioelectric Potential under LED Light

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Bioelectric potential is caused by ion stream in vegetation tissue. This potential could be applied as a speaking plant approach (SPA) technique. In this study, the potential of white radish is measured in an ethyl alcohol atmosphere to establish the SPA technique. The absolute summation (v_{m1}) of the potential for 1 min is adopted to analyze the potential characteristic, and the frequency of an LED panel and the ethyl alcohol concentration are adopted as parameters. Moreover, the absorption capability (P_a) of white radish for the alcohol is derived and its relationship with v_{m1} is examined. As a result, it is clarified that there is a correlation between v_{m1} and P_a , namely, P_a increases with v_{m1} . The distribution of P_a in relation to the light frequency and concentration indicates a normal distribution, and it is considered that the potential is related to the growth rate of vegetation. Other summations v_{m30} and v_{h1} for 30 min and 1 h are also adopted to derive their relationship with the absorption capability (P_a) for the substance.

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