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## CERTIFICATE

This is to certify that the dissertation entitled “ **Production and Characterization of Biosurfactant from *Pseudomonas* Species using *Parthenium* weed as Substrate** ” submitted to the Karpagam Academy of Higher Education in partial fulfillment of the requirements for the award of the degree of **Bachelor of Science in Microbiology** is a bonafide record of original research work done by **Keerthana K** during the period 2019- 2020 of their study in the Department of Microbiology at Karpagam Academy of Higher Education, Coimbatore, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree/Diploma/Associate/Fellowship or similar title to any candidate of any University.

**Signature of Head of the Department**

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