

Certificate

CERTIFICATE

This is to certify that the thesis, entitled “**Potential Utilization of Pod Shell and Bivalve Shell in Metal Ions / Anion Sorption from Aqueous Matrices and Industrial Effluents**”, submitted to the Bharathiar University, in partial fulfilment of the requirements for the award of the Degree of **Doctor of Philosophy in Chemistry** is a record of original research work done by **Ms. N. Shyamala Devi** during the period 2012-2018 of her research in the Department of Chemistry at PSGR Krishnammal College for Women under my supervision and guidance and the thesis has not formed the basis for the award of any Degree / Diploma / Associateship / Fellowship or other similar title of any candidate of any University.

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Declaration

DECLARATION

I, **Ms. N. Shyamala Devi**, hereby declare that the thesis, entitled “**Potential Utilization of Pod Shell and Bivalve Shell in Metal Ions / Anion Sorption from Aqueous Matrices and Industrial Effluents**”, submitted to the Bharathiar University, in partial fulfilment of the requirements for the award of the Degree of **Doctor of Philosophy in Chemistry** is a record of original and independent research work done by me during 2012-2018 under the Supervision and Guidance of **Dr. N. Muthulakshmi Andar M.Sc., Ph.D.**, Assistant Professor, Department of Chemistry at PSGR Krishnammal College for Women and it has not formed the basis for the award of any Degree/ Diploma/ Associateship/ Fellowship or other similar title to any candidate in any University.

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This is to certify that the Ph.D. candidate **Ms. N. Shyamala Devi** working under my supervision has published a research article entitled, “**Virtual Screening of Treated *Pistachio vera* Shell Powder as a Potential Sorbent in Sequestering Ubiquitous Divalent Metal Ions from Aqueous matrices**” in, *Oriental Journal of Chemistry*, Vol. No. **34(1)** Page Nos **352-361, 2018**. The contents of the publication incorporate a part of the results presented in the thesis.

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