

# Bio-desalination using *Phyllanthus emblica* and *Terminalia chebula* †

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† Presented at Virtual symposium to observe World Antimicrobial Awareness week “Applications of biotechnology and microbiology with special emphasis on Antimicrobial resistance”, 18-24 November 2020, Chennai, India

Received: 10.11.2020; Revised: 15.11.2020; Accepted: 17.11.2020; Published: 10.01.2021

**Abstract:** Owing to pollution, the future existence of our planet earth is at stake. There is an immediate need for us to start a mass afforestation program. For that, we need fresh water, which is already scarce. So there comes the necessity to produce a huge quantity of fresh water to foster trees and also for human consumption. Seawater, which is about 97% of the earth’s water resource, can be utilized for this purpose. Our objective is to generate freshwater from seawater by desalination using Gooseberry (*Phyllanthus emblica*) and Kadukkai (*Terminalia chebula*). The seawater was collected, and its Chlorine, Sodium, and Magnesium content were measured. It is then treated with the extracts taken from gooseberry and kadukkai plants. The measurements are noted once again after treatment and compared with the former. There is a good reduction in the amount of Chlorine, Sodium, and Magnesium. As these three seawater elements are mainly responsible for their salinity, their reduction ultimately reduces sea water salinity. Thus the seawater was converted into freshwater using a natural, eco-friendly source. This will reduce the extensive usage of electricity employed for desalination by distillation and by Pressure filtration.

**Keywords:** seawater; bio-desalination; *Phyllanthus emblica*; *Terminalia chebula*; freshwater.

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## Funding

This research received no external funding.

## Acknowledgments

This research has no acknowledgment.

## Conflicts of Interest

The authors declare no conflict of interest.