# Experimental Investigation and Parameter Analysis of Solar Still with the Different Wick Materials

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**ABSTRACT:** *This paper aims to produce freshwater from saline water with the help of solar still. Different solar wick materials still absorb the sunlight and convert the heat energy, such as black sheer mesh fabric, light black cotton fabric, light jute fabric, black velvet fabric, and 4 mm thick sponge sheet. The wick materials sheets were wholly immersed in the saline water covering the total still basin area. The net basin horizontal active area of the solar still is 0.48 m², and the glass cover's tilted angle was fixed at 36°. From this arrangement, it has been found that by the use of various wick materials, the productivity rate differs from each other, and among these wick materials, light black cotton is the most effective wick material for solar still productivity increment. The pH value measures the final quality of the freshwater.*

**KEYWORDS:** *Solar still; Wick materials; Solar intensity; pH value.*

## INTRODUCTION

In the current scenario, people were facing water scarcity problems every day. So we need to move some alternative solutions to produce the drinking water. In the world, 97 % of the water available in the ocean cannot be drunk and used for other irrigation purposes. Some governments took action for converting seawater into drinking water with Reverse Osmosis System. The RO the method has a very high cost and electric power supply to run the plant. RO has only operated by only on coastal places, and it will need routine maintenance. Solar still is one of the alternative methods to produce drinking water at a low cost. Normally the conventional method of stills, the productivity was very less. The output (quality and quantity of water) of the stills was not accurate.

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