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Performance of single-slope single-basin solar still with sensible heat storage materials

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ABSTRACT

A single-slope single-basin solar still with an inner basin size of 1×1 m has been fabricated with a layer of copper sheet in the basin. The still has been provided with a dripping arrangement to pour saline water drop by drop into the basin. The system has been tested with the dripping of saline water and with different sensible heat storage materials like white marble stones, pebbles, black stones, calcium stones, and iron scraps. It has been found that the calcium stones in the basin with dripping of saline water to maintain the least water depth have a significant effect on the production and validated with the experimental results.

Keywords: Basin solar still; Absorbing materials; Sensible heat storage materials

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