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# Effect of Capillarity Direction on Solar Still Performance

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**Abstract.** The demand for clean water follows with the increase in population, especially in rural areas where existing water sources are polluted with substances that may be harmful to our bodies. Solar still is a cheap and easy-to-use alternative for converting brackish water into clean water however it has lower efficiency compared to other methods. This study aims to increase the efficiency of basin-type solar still by using the interfacing and capillarity method. The experiment is conducted indoors in a laboratory using heating lamps to simulate solar energy. The dimension for the basin is 32 cm x 32 cm. The variations are differentiated by capillarity and interfacing material. Sensors are controlled with an Arduino microcontroller to record the temperature and water yield every 10 seconds. The results are then compared with the conventional solar still to find the increase in efficiency. The results of the experiment shows that the interfacing and capillarity method affects the performance of the basin-type solar still. The best results has an efficiency of 52.5% from the inwards capillarity direction. This study can be applied in rural or areas with scarce clean water to improve current solar still.