mL and 740 mL respectively from 8.00 to 17.00 for the basin area of (0.46*0.56) m^2. It can clearly be observed that reducing the gap improves the distillate yield significantly. This can be attributed to higher rate of convective heat transfer also, as the heated water surface and comparatively cooler glass surface comes closer the rate of distillation increases therefore, an increase in productivity is observed on reducing the gap so, the showed that the low gap distance system increases productivity by about 60%.

V. Conclusions

Single basin solar stills use for converting available salt or brackish water into potable water also, they are cheap and easy to construct, so they have more applications in our life such as industrial processes, Sterilization, and battery maintenance and radiator. Tow solar stills were studied, and the effect of reducing the gap between absorber and condenser cover was experimentally evaluated. It was found that reducing the gap increases daily productivity by 60%. Reducing the gap between absorber and condenser cover increases the convective heat transfer between the water surface and condenser cover. The low gap distance still is more significant than the high gap distance. As the heated water surface and comparatively cooler glass surface comes closer the rate of distillation increases therefore, an increase in productivity is observed on reducing the gap. Reducing the gap distance will reduce the height of the walls of the cover slope and hence will reduce the shadowing effect of these sides. Finally, the gap distance between water surface and cover is reduced from 26.0 cm to 6.0 cm.

VI. References

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