

PERFORMANCE EVALUATION OF SOLAR STILLS

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ABSTRACT : A component wise performance evaluation of multi wick solar still (MWSS) device developed at Department of Renewable Energy Sources, College of Technology and Engineering, Udaipur was carried out and compared with the performance single basin type solar still (SBSS). Overall efficiency of MWSS and SBSS were found to be 32.9% and 20.6% respectively. The yield of distilled water in MWSS device was varied from 3.9 to 4.17 Lt./m² day where as in case of SBSS devise it was 2.4 to 2.7 Lt. /m² day from April to June. The physicochemical analysis was made to examine the effect of distillation on tap water. A drastic reduction in the TDS, Chlorides, Calcium hardness and Magnesium hardness, dissolved silica was observed through solar distillation.

Key Words : MWSS, SBSS, TDS, PH.