THE CONICAL SOLAR STILL:
DETERMINATION OF THE PROPER TILT ANGLE

Thesis submitted in Partial Fulfilment of The requirements of the Degree of
MASTER of SCIENCE
in
MECHANICAL ENGINEERING
YARMOUK UNIVERSITY
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B.Sc. IN MECHANICAL ENGINEERING, 1969

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May 1985
ABSTRACT

The design of a conical type solar still is studied. The still basin is circular and the glazing covering is in the form of a right cone. Emphasis is placed on finding a criterion for the selection of the slope angle of the cone such that the energy absorbed is maximum.

An experimental model of the still is tested using several slope angles, and the theoretical criterion of slope is verified experimentally.

In this still, plastic film is used as a transparent cover instead of glass, which is simpler for fabrication. The cover is supported on a central rod of variable height to facilitate the variation of the tilt angle.

The productivity of the still during July month reached 4.25 liter/m² day at a slope angle of 45°.