

NOMENCLATURE

PCM	Phase change material
WHO	World health organization
UNICEF	United nations international children's emergency fund
A₁	Area of water basin (m ²)
A₂	Area of contact between water and copper cylinder (m ²)
A₃	Cross section area of cylinder (m ²)
A₄	Total surface area of cylinder (m ²)
SSS	Simple solar still
SSPCM	Solar still with phase change material
SSNPCM	Solar still with phase change material doped with nanoparticle
h	Heat transfer coefficient (W/m ² K)
I_L	Solar intensity for lauric acid
I_S	Solar intensity for stearic acid
I_P	Solar intensity for paraffin wax
T_{aL}	Ambient temperature for lauric acid (°C)
T_{aS}	Ambient temperature for stearic acid (°C)
T_{aP}	Ambient temperature for paraffin wax (°C)
T_{gi}	Temperature of glass inner surface (°C)
T_{go}	Temperature of glass outer surface (°C)
Q_{cwg}	Convective heat transfer rate from water to glass cover (W/m ²)
hc_{wg}	Convective heat transfer coefficient from water to glass cover (W/m ² K)
Q_{ewg}	Evaporative heat transfer rate from water to glass cover (W/m ²)

hewg	Evaporative heat transfer coefficient from water to glass cover (W/m ² K)
Qrwg	Radiative heat transfer rate from water to glass cover (W/m ²)
hrwg	Radiative heat transfer coefficient from water to glass cover (W/m ² K)
Qtwg	Total heat transfer rate from water to glass cover (W/m ²)
htwg	Total heat transfer coefficient from water to glass cover (W/m ² K)
Qcdgi-go	Conductive heat transfer rate from glass inner surface to outer surface (W/m ²)
Pgi	Partial vapour pressure at glass inner surface temperature (N/m ²)
Tw	Temperature of water (°C)
ME	Equivalent heat capacity (J/K)
Pw	Partial vapour pressure of water (N/m ²)
Kg	Thickness of glass (mm)
Lg	Thickness of liner
K	Thermal conductivity (W/m K)
X	Thickness (mm)
T	Temperature (°C)
εeff	Effective emissivity
Q	Heat transfer rate (W/m ²)
εe	Effective remittances