

## Design and performance analysis acrylic coated small scale passive solar air heater

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This paper presents design and performance analysis of acrylic coated small scale passive solar air heater, which can be easily and economically fabricated from recycled aluminium drink cans. Aluminium cans are used as absorbing medium. In the experimental study, a solar air heater with the length of 1.2 m, width 0.6 m was fabricated and performance study was carried out in 8 different cases, without acrylic coating and with black coating of absorbing medium with natural air inlet and forced air inlet at horizontal and inclined with tilt angle of 35° of air heater. The experimental results show that coating and inclination and mass flow rate affect the efficiency of solar air heater. The efficiency is more at inclination than at horizontal.

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