

Parabolic Design Solar Cooker Combine With Flat Reflector As Solar Concentrator

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Abstract

Solar stove parabolic type with flat reflectors combination as solar concentrator is designed with diameter size 100 centimeters and height 50 cm. Testing done by comparing solar stove without reflectors with solar stove with the addition of reflectors. Solar stove is used to heat 2.5 kg water. The results of testing solar stove system in 6 days start at 11 am until 2 pm western Indonesia time, solar stove system by the addition of reflectors have better performance because of having highest temperature value the water of 82.7⁰c with the highest efficiency of 9 % , while in solar stove parabolic type without additional reflectors flat having highest temperature value the water is of 76,1⁰c with highest efficiency of 7.4 %.

Keywords : Solar cooker, Flat reflector, efficiency and Parabolic type.