

TECHNICAL DATA OF YOUR SOLAR DEVICE

Name of the solar device:

Windshield Shade Solar Funnel Cooker

Family

- solar cooker
- solar potabilizator
- food dryer
- others (specify): _____

Production:

- self-made
- commercial

Type of solar device (oven/parabolic/etc., accumulation and/or concentration, direct/indirect): _panel cooker, funnel

General description: ___

An instant portable solar cooker, made from a reflective accordion-folded car windshield shade.

Size (cm): Folded up – 13.5 x 60
Unfolded -- 60 x 128

Opening area: 32 cm. diameter

Weight (Kilograms): 8 grams

Materials:

- A reflective accordion-folding car sunshade
- A cake rack about 25 cm. sq. (or wire frame or grill)
- 12 cm. (4 ½ in.) of Velcro
- Black pot
- Bucket or plastic wastebasket
- A plastic oven bag

Temperatures: 175 C.

Comments: To construct:

1. Lay the sunshade out with the notched side toward you, as above.
2. Cut the Velcro into three pieces, each about 4 cm. or 1 ½ inches long.

3. Hand sew one half of each piece, evenly spaced, onto the edge to the left of the notch; sew the matching half of each piece onto the underneath side to the right of the notch, so that they fit together when the two sides are brought together to form a funnel. (see below) Note: I first tried sewing these on a sewing machine, but found it cut through the reflective material.
4. Press the Velcro pieces together, and set the funnel on top of a bucket or a round or rectangular plastic wastebasket.
5. Place a black pot on top of a square cake rack, placed inside a plastic baking bag. A standard size rack in the U.S. is 25 cm. (10 in.). This is placed inside the funnel, so that the rack rests on the top edges of the bucket or wastebasket. Since the sunshade material is soft and flexible, the rack is necessary to support the pot. It also allows the sun's rays to shine down under the pot and reflect on all sides. If such a rack is not available, a wire frame could be made to work as well. Note: the flexible material will squash down around the sides of the rack.

The funnel can be tilted in the direction of the sun.

A light-weight stick placed across from one side of the funnel to the other helps to stabilize it in windy weather.

After cooking, simply fold up your "oven" and slip the elastic bands in place for easy travel or storage.

Documentation available: I have found this totally simple solar cooker extremely practical, as it is so lightweight and easy to carry along anywhere. It has reached a little above 350 degrees F. I have cooked black beans in about the same amount of time as on a gas stove; I've used it to bake breads, granola, cakes, lasagna, all sorts of vegetables, and to purify water.

Available Maps: used in southern Mexico in the state of Oaxaca.

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Commercial availability (if it is a commercial device):

The sunshade may not be available everywhere but can generally be found in most urban areas, since I found it here in southern Mexico. The Velcro was also available in fabric stores. Cost of the sunshade was about \$3.00 USD; the Velcro about \$.25.

Picture/s

