

Instructions for Using **Solar Cooker**



Solar Cooker

The solar cooker is a new technology that can help solve energy shortage problems for cooking and protects the environment, especially in remote villages. By using solar cookers, we can reduce the cutting down of trees and forests and removal of shrubs by the roots for fuel.

There are two main types of solar cookers:

- Dish-shaped solar cooker (Parabolic)
- Box-shaped solar cooker

Dish-shaped Solar Cooker

The dish-shaped solar cooker has a special design and reflects sunlight. It is more effective than box-type solar cookers. The heat in this cooker usually reaches between 82°C to 135°C.

This cooker has reflective glass surfaces that can reflect up to 90% of sunlight. When a pot is placed in the center, it can heat, cook food, or even bake bread. This type of cooker is best for sunny days.

The cooking time depends on the type of food, but usually this kind of solar cooker can cook food well in 30 minutes to one hour using only sunlight. It is better to use a black pot for cooking, because black color absorbs more heat.



Figure 1: Images showing dish-shaped solar cookers can be seen.



Figure 2: The main parts of the solar cooker are shown above.

Parts of a Solar Cooker:

1. **Reflector (Sunlight Reflecting Surface):** The reflector bounces sunlight to one point called the "focus." This is where the pot is placed for cooking.
2. **Pot Area:** This is the place where the pot is placed for cooking.
3. **Stand/Base:** It holds the reflector at the correct angle with the sun.
4. **Angle Adjuster:** A tool that adjusts the angle of the solar cooker so that the sunlight hits the focus point as much as possible.

Benefits of Using a Solar Cooker:

1. Saves cooking costs.
2. Needs little maintenance or care.

3. While the food is cooking, you can do other work.
4. It doesn't make smoke, so it doesn't harm the eyes or lungs. It's good for people with breathing problems.
5. Solar cookers are different in types, portable, and can be adapted to different conditions.
6. Help reduce cutting down trees.
7. Good for the environment.
8. Reduces air pollution from smoke and the use of fossil fuels.

How to Use a Solar Cooker:

1. Place the solar cooker where the sunlight falls well on it.
2. Adjust it so that all sunlight focuses on the center point (focus).
3. When placing the pot in the cooker, make sure sunlight is properly hitting it.
4. Because the sun moves, adjust the solar cooker angle every 15 minutes.

Care and Maintenance:

1. Take care of the solar cooker properly.
2. Keep it away from children.
3. Clean the glass before using the cooker.
4. Don't clean the glass with things that can damage it, like petrol or similar items.
5. Use soft clothes to clean the glass to avoid scratching it.
6. Keep the solar cooker away from snow and rain.

Cooking Timetable for Dish-shaped Solar Cooker:

No.	Food	Quantity (kg)	Cooking Time
1	Rice	2 kg	45 minutes
2	Chicken Eggs	5 eggs	10 minutes
3	Carrots	1 kg	40 minutes
4	Potatoes	1 kg	30 minutes
5	Chicken Meat	5.1 kg	1 hour 20 mins
6	Lamb Meat	1 kg	1 hour 40 mins

Note: The above cooking times apply when using black-colored cooking pots in the solar cooker.

Conclusion:

The solar cooker does not produce smoke, which helps prevent problems with the eyes, lungs, and breathing. It has also proven to be good for the environment. A solar cooker not only reduces the cost of fuel but also removes the dangers of smoke and does not harm human health.

It is especially safe and suitable for people who have breathing issues or allergies.

For example, **Gul Meewa**, a resident of Barkakhil and a mother of six children, used to suffer from eye and breathing problems caused by the smoke from traditional wood-burning stoves. According to her, doctors told her that smoke was triggering her allergies. Later, she received a solar cooker, which changed her life.

Smoke-free cooking, a cleaner environment, better health, reduced use of firewood, and time-saving were the benefits she gained. The solar cooker gave her back good health and an easier life.



Figure 3: Cooking with a solar cooker.



Figure 4: Before receiving the solar cooker – cooking on a traditional stove.