

SOLAR COOKING FOUNDATION the NETHERLANDS

Outline for a Workshop: How to pasteurize water with the Solar Cookit

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Preparations for a workshop. (20 women)

Morning: Around 9.00 ? or 10.00? if possible for the women

Take in total 8 cookitsets with you, including black water cans.

Needed: For pasteurizing water 4 Cookit sets, (4 Cookits, 4 plastic bags, four pieces of string, 8 clothes pegs, 8 black cans, 8 small piece of flat wood or 4 flat stones to put under water cans; 8 WAPI's (Water Pasteurization Indicator), small pieces of cloth to remove the hot lid of the water cans.

Take with you a note book and pen to make notes.

The program

- *Try to be on location half an hour before the workshop starts for preparations.*
- Organize water and prepare beforehand one Cookit with the two black cans filled with water and the WAPI as instructed and place into the sun. The water in the can pasteurizes while you proceed with the workshop.
- Welcome all the women. In the cotton bag you will find Cookit instruction on water pasteurization, How to use the Cookit; and you will find the yellow flyer.
- Tell the women the workshop will take 2 ½ to 3 hours.

- ***Explain about the WAPI (Water Pasteurization Indicator);***
- When the WAPI wax melts and falls to the bottom of the WAPI, the water has been pasteurized.

- ***Fill the cans with water and filter the water*** by using folded cotton or sari material;
- Show how to hang the WAPI in the can: Insert the WAPI ,wax up, let it fall down to the bottom of the can with the string hanging outside the can. Carefully replace the lid.
- Place the Cookit in a sunny spot with no wind (or protected from wind).
- Place two large stones on the outside parts of the Cookit for support. Wind may occur.
- Put the two cans with the six (2x3) small stones into the bag, into the Cookit.
- Allow the water to heat. Two 2-litre cans take 2 ½ hours.
- Questions...

- ***Explain how the Solar Cookit works.***
- Sun, heat, reflection, black can, heat absorption, heat resistant bag.
- Give a demonstration. Show the cotton bag, unfold the Cookit, clothes pegs, show the black can, plastic bag, string, three stones.
- Tell in general about the necessity of using solar energy. Less wood, less fuel, less deforestation, no toxic smoke when heating.
- Solar energy is safe, is free, saves money, saves time (in rural areas) and saves the environment

- **Why Pasteurize?**

- Tell about the importance of healthy water.
- Disease causing organisms in water are killed by exposure to heat in a process called **Pasteurization**.
Water that has been heated to 65° - 70° C for 5 minutes is free from microbes.
- Worldwide unsafe water is a major health problem. Diseases are spread through contaminated water. When there is no access to safe water, waterborne diseases are responsible for approx. 80% of all illnesses and deaths in many African and Asian countries, especially children.
- Tell about the various diseases prevented by safe water. Amoebic dysentery, Diarrhoea, Typhoid, Salmonella, Hepatitis A, Cholera, Guinea worm disease.
- Explain about the temperature in the Cookit (up to 85 C) and the temp. of pasteurizing water. (65°-70°C)
- NOTE: Pasteurization is not the same as sterilization. With sterilization ALL heat resistant spores are killed. (temp 100° C). The heat-resistant spores that do survive temperatures above 65 C are harmless to drink! So pasteurization of water is safe !
- Tell about your own experience heating water with solar energy.
- Explain the need of healthy drinking water and safe water for baby care.
- Tell about your own experience heating water with solar energy.
- Questions...
- **Exercise.:** let all the women fold and unfold the Cookit; insert the WAPI into the can and let them place the can on the stones into the plastic bag. (important to learn)
- Talk about the effect of wind on the temperature inside the Cookit.
- Discuss the months June and July, rain season, clouds. In very cloudy and wet weather you cannot use the Cookit. Partly cloudy is mostly possible but will take longer.

After 2 ½ hours open the bag and check the WAPI.

Write down the names of the women attending the workshop.
Write down which women want to buy a Cookitsets / black can.
Arrange this.
Make an appointment for a follow-up meeting.

Follow-up and evaluation after the first workshop.

- * Take a Cookit set and two cans.
- * If women have a cookit set: discuss the experiences of the women using the Cookit and pasteurizing water at home;
- * Discuss using healthy water for baby and little children;
- * Discuss difficulties and give information if needed.
- * Let the women fold and unfold the Cookit. Use instructions.
- * Discuss motivation of women to buy a cookitset.
- * Arrange for a next meeting.

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